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

1.1 Product identifier

Ultraschall-Koppelmittel ZGF

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

1.2.1 Relevant uses

Coupling gel

1.2.2 Uses advised against

None known.

1.3 Details of the supplier of the safety data sheet

Company

Waygate Technologies Baker Hughes Digital Solutions GmbH
Robert-Bosch-Str. 3
50354 Hürth / GERMANY
Phone +49 (0) 2233-601-0
Fax +49 (0) 2233-601-402
Homepage www.waygate-tech.com
E-mail geitsales.emea@bakerhughes.com

Address enquiries to

Technical information geitsales.emea@bakerhughes.com

Safety Data Sheet sdb@chemiebuero.de

1.4 Emergency telephone number

Company +49 (0) 700-24112112 (GEC)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture [REGULATION (GB) CLP]

STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure.

2.2 Label elements

The product is required to be labelled in accordance with regulation CLP.

Hazard pictograms

Signal word WARNING

Contains: Ethylene glycol

Hazard statements H373 May cause damage to organs through prolonged or repeated exposure.

Precautionary statements

P260 Do not breathe vapours / spray.
P314 Get medical advice / attention if you feel unwell.
P501 Dispose of contents/container in accordance with local/national regulation.

2.3 Other hazards

Human health dangers Irritant gases/vapours.

Environmental hazards This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Other hazards Further hazards were not determined with the current level of knowledge.

SECTION 3: Composition / Information on ingredients

3.1 Substances

not applicable

3.2 Mixtures

The product is a mixture.

Range [%]	Substance
20 - 25	Ethylene glycol
	CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1, Reg-No.: 01-2119456816-28-XXXX
	GHS/CLP: Acute Tox. 4: H302 - STOT RE 2: H373
< 0.5	2-Ethylhexanoic acid
	CAS: 149-57-5, EINECS/ELINCS: 205-743-6, EU-INDEX: 607-230-00-6, Reg-No.: 01-2119488942-23-XXXX
	GHS/CLP: Repr. 2: H361d

Comment on component parts Substances of Very High Concern - SVHC: substances are not contained or are below 0.1%.
For full text of H-statements: see SECTION 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General information Take off contaminated clothing and wash before reuse.
If unconscious, place in recovery position and get medical attention immediately.

Inhalation Ensure supply of fresh air.
Remove the victim into fresh air and keep him calm.
If breathing is irregular or stopped, administer artificial respiration.
Consult a doctor immediately.

Skin contact In case of contact with skin wash off immediately with soap and water.
Consult a doctor if skin irritation persists.

Eye contact Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
If eye irritation persists: Get medical advice/attention.

Ingestion Rinse mouth.
Do not induce vomiting.
Get medical advice.

4.2 Most important symptoms and effects, both acute and delayed

Shortness of breath
Dizziness
Cough
Headache
Gastro-intestinal complains.
Nausea, vomiting.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically.
Forward this sheet to your doctor.

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media Product itself is non-combustible. Fire extinguishing method of surrounding areas must be considered.

Extinguishing media that must not be used Full water jet

5.2 Special hazards arising from the substance or mixture

Risk of formation of toxic pyrolysis products.
Smoke

5.3 Advice for firefighters

Use self-contained breathing apparatus.

Cool containers at risk with water spray jet.
Collect contaminated firefighting water separately, must not be discharged into the drains.
Fire residues and contaminated firefighting water must be disposed of in accordance within the local regulations.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Ensure adequate ventilation.
High risk of slipping due to leakage/spillage of product.
Wear suitable protective equipment. For personal protection see SECTION 8.
Remove persons to safety.

6.2 Environmental precautions

Do not discharge into the drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Pick up with absorbent material (e.g. sand, universal absorbent, diatomaceous earth).
Dispose of absorbed material in accordance within the regulations.

6.4 Reference to other sections

See SECTION 8+13

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Use only in well-ventilated areas.
Avoid contact with eyes and skin. Use personal protective equipment.
The normal safety precautions for handling chemicals must be observed.

Do not smoke.

Do not eat, drink, smoke or take drugs at work.
Wash hands before breaks and after work.
Use barrier skin cream.
Take off contaminated clothing and wash before reuse.
Contaminated work clothing should not be allowed out of the workplace.

7.2 Conditions for safe storage, including any incompatibilities

Keep only in original container.

Do not store together with oxidizing agents.
Do not store together with acids and alkalies.

Keep container tightly closed.
Keep container in a well-ventilated place.
Store in a dry place.
Protect from heat/overheating and from sun.
Recommended storage temperature: 5 - 30°C

7.3 Specific end use(s)

See product use, SECTION 1.2

SECTION 8: Exposure controls / personal protection

8.1 Control parameters

Ingredients with occupational exposure limits to be monitored (GB)

Substance
Ethylene glycol
CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1, Reg-No.: 01-2119456816-28-XXXX
Long-term exposure: 20 ppm, 52 mg/m³, Vapour, particulate: 10 mg/m³
Short-term exposure (15-minute): 40 ppm, 104 mg/m³

Ingredients with occupational exposure limits to be monitored (EU)

Substance / EC LIMIT VALUES
Ethylene glycol
CAS: 107-21-1, EINECS/ELINCS: 203-473-3, EU-INDEX: 603-027-00-1, Reg-No.: 01-2119456816-28-XXXX
Eight hours: 20 ppm, 52 mg/m³, H
Short-term (15-minute): 40 ppm, 104 mg/m³

DNEL

Substance
Ethylene glycol, CAS: 107-21-1
Industrial, dermal, Long-term - systemic effects, 106 mg/m³
Industrial, inhalative, Long-term - local effects, 35 mg/m³
general population, dermal, Long-term - systemic effects, 53 mg/m³
general population, inhalative, Long-term - local effects, 7 mg/m³
2-Ethylhexanoic acid, CAS: 149-57-5
Industrial, dermal, Long-term - local effects, 2 mg/kg bw/day
Industrial, inhalative, Long-term - local effects, 14 mg/m³
general population, oral, Long-term - local effects, 1 mg/kg bw/day
general population, dermal, Long-term - local effects, 1 mg/kg bw/day
general population, inhalative, Long-term - local effects, 3.5 mg/m³

PNEC

Substance
Ethylene glycol, CAS: 107-21-1
freshwater, 10 mg/L
seawater, 1 mg/L
sediment (freshwater), 37 mg/kg
soil, 1.53 mg/kg
sewage treatment plants (STP), 199.5 mg/l (AF=10)
sediment (seawater), 3.7 mg/kg
2-Ethylhexanoic acid, CAS: 149-57-5
soil, 0.712 mg/kg soil dw
sediment (seawater), 0.474 mg/kg sediment dw
sediment (freshwater), 4.74 mg/kg sediment dw
sewage treatment plants (STP), 71.7 mg/L
seawater, 0.04 mg/L
freshwater, 0.398 mg/L

8.2 Exposure controls

Additional advice on system design	Ensure adequate ventilation on workstation. Measurement methods for taking workplace measurements must meet the performance requirements of DIN EN 482. For example, recommendations are given in the IFA's list of hazardous substances.
Eye protection	If there is a risk of splashing: Safety glasses. (EN 166:2001)
Hand protection	The details concerned are recommendations. Please contact the glove supplier for further information. In full contact: > 0.5 mm: Butyl rubber, >480 min (EN 374-1/-2/-3). > 0.5 mm: Neoprene, >480 min (EN 374-1/-2/-3). > 0.5 mm: Nitrile rubber, >480 min (EN 374-1/-2/-3).
Skin protection	Protective clothing (EN 340)
Other	Do not breathe vapour/spray. Avoid contact with eyes and skin. Personal protective equipment should be selected specifically for the working place, depending on concentration and quantity handled. The resistance of this equipment to chemicals should be ascertained with the respective supplier.
Respiratory protection	In the event of occupational exposure limits being exceeded or of inadequate ventilation: wear appropriate respiratory protection. Short term: filter apparatus, combination filter A-P2. (DIN EN 14387)
Thermal hazards	No information available.
Delimitation and monitoring of the environmental exposition	Comply with applicable environmental regulations limiting discharge to air, water and soil.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Physical state	liquid
Color	colourless
Odor	characteristic
Odour threshold	No information available.
pH-value	8 (20°C)
pH-value [1%]	No information available.
Boiling point [°C]	100
Flash point [°C]	not applicable
Flammability (solid, gas) [°C]	not applicable
Lower explosion limit	3.2 Vol. % (CAS 107-21-1)
Upper explosion limit	53 Vol.% (CAS 107-21-1)
Oxidising properties	no
Vapour pressure/gas pressure [kPa]	1.6 (20°C)
Density [g/cm³]	1.03 (20°C)
Relative density	No information available.
Bulk density [kg/m³]	not applicable
Solubility in water	miscible
Solubility other solvents	No information available.
Partition coefficient [n-octanol/water]	not applicable
Kinematic viscosity	>12 s (20°C. 4 mm) (DIN 53211)
Relative vapour density	No information available.
Evaporation speed	No information available.
Melting point [°C]	No information available.
Auto-ignition temperature	No information available.
Decomposition temperature [°C]	No information available.
Particle characteristics	not applicable

9.2 Other information

none

SECTION 10: Stability and reactivity

10.1 Reactivity

See SECTION 10.3.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

Reactions with acids, alkalies and oxidizing agents.

10.4 Conditions to avoid

Strong heating.

10.5 Incompatible materials

See SECTION 10.3.

10.6 Hazardous decomposition products

No decomposition if used and stored according to specifications.
In the case of heating following (decomposition) products may occure:
Carbon dioxide (CO2).
Carbon monoxide (CO).
Nitrous oxides (NOx).

SECTION 11: Toxicological information

11.1 Information on hazard classes as defined in Regulation (EC) No 1272/2008

Acute oral toxicity

Product
ATE-mix, oral, > 2000 mg/kg

Substance
Ethylene glycol, CAS: 107-21-1
LD50, oral, Rat, 7712 mg/kg bw
ATE, oral, 500 mg/kg (Acute Tox. 4)
2-Ethylhexanoic acid, CAS: 149-57-5
LD50, oral, Rat, 3000 mg/kg (IUCLID)

Acute dermal toxicity

Product
Based on the available information, the classification criteria are not fulfilled.

Substance
Ethylene glycol, CAS: 107-21-1
LD50, dermal, mouse, >3500 mg/kg bw
2-Ethylhexanoic acid, CAS: 149-57-5
LD50, dermal, Rabbit, > 2000 mg/kg (OECD 402)

Acute inhalational toxicity

Product
Based on the available information, the classification criteria are not fulfilled.

Substance
Ethylene glycol, CAS: 107-21-1
LC50, inhalative, Rat, >2.5 mg/L air, 6h
2-Ethylhexanoic acid, CAS: 149-57-5
LC0, inhalative, Rat, 110 mg/m³/8h

Serious eye damage/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Ethylene glycol, CAS: 107-21-1
Eye, non-irritating
2-Ethylhexanoic acid, CAS: 149-57-5
no adverse effect observed

Skin corrosion/irritation Based on the available information, the classification criteria are not fulfilled.

Substance
Ethylene glycol, CAS: 107-21-1
dermal, non-irritating
2-Ethylhexanoic acid, CAS: 149-57-5
Slight irritant effect - does not require labelling.

Respiratory or skin sensitisation Based on the available information, the classification criteria are not fulfilled.

Substance
Ethylene glycol, CAS: 107-21-1
dermal, non-sensitizing
2-Ethylhexanoic acid, CAS: 149-57-5
dermal, no adverse effect observed

Specific target organ toxicity — single exposure Based on the available information, the classification criteria are not fulfilled.

Specific target organ toxicity — repeated exposure Ingredients:
CAS 107-21-1: May cause damage to organs through prolonged or repeated exposure (oral, kidney).
Product:
May cause damage to organs through prolonged or repeated exposure.

Substance
Ethylene glycol, CAS: 107-21-1
NOAEL, dermal, Dog, 2200 mg/kg bw/day, adverse effect observed
NOEL, oral, Rat, 150 mg/kg bw/day, OECD 408, adverse effect observed

Mutagenicity Based on the available information, the classification criteria are not fulfilled.

Substance
Ethylene glycol, CAS: 107-21-1
in vitro, no adverse effect observed
2-Ethylhexanoic acid, CAS: 149-57-5
in vivo, negativ
in vitro, negativ

Reproduction toxicity Based on the available information, the classification criteria are not fulfilled.

Substance
2-Ethylhexanoic acid, CAS: 149-57-5
NOAEL, oral, Rat, 800 mg/kg bw/d (Effect levels (F1)), OECD 433
NOAEL, oral, Rat, 250 mg/kg bw/d (Effect levels (P0)), OECD 433

Carcinogenicity Based on the available information, the classification criteria are not fulfilled.

Aspiration hazard Based on the available information, the classification criteria are not fulfilled.

General remarks Has a degreasing effect on the skin.
May cause irritation of eye.

Toxicological data of complete product are not available.
The toxicity data listed pertaining to the ingredients are intended for those working in the medicinal professions, experts for occupational health and safety and toxicologists. The toxicity data pertaining to the ingredients were supplied by the manufacturers of raw materials.

11.2 Information on other hazards

Endocrine disrupting properties No information available.

Other information none

SECTION 12: Ecological information

12.1 Toxicity

Substance
Ethylene glycol, CAS: 107-21-1
LC50, (28d), fish, 1.5 g/L
LC50, (3d), fish, 72.86 g/L
EC50, (4d), Invertebrates, 3.536 - 13 g/L
EC50, (21d), Invertebrates, 33.911 g/L
EC50, (48h), Invertebrates, 100 mg/L
2-Ethylhexanoic acid, CAS: 149-57-5
LC50, (96h), Leuciscus idus, > 250 mg/l
EC50, Pseudomonas putida, 110 mg/l (17 h) (IUCLID)
EC50, (48h), Daphnia magna, 85.4 mg/l (IUCLID)
IC50, (72h), Desmodesmus subspicatus, 61 mg/l (IUCLID)

12.2 Persistence and degradability

Behaviour in environment compartments	No information available.
Behaviour in sewage plant	No information available.
Biological degradability	CAS 107-21-1: 100%. 10d (OECD 301A) CAS 149-57-5: 85-95%. 6d (OECD 302B)

12.3 Bioaccumulative potential

CAS 107-21-1: log Pow = -1.36
CAS 149-57-5: log Pow = 2.64

12.4 Mobility in soil

No information available.

12.5 Results of PBT and vPvB assessment

not applicable

12.6 Endocrine disrupting properties

No information available.

12.7 Other adverse effects

Ecological data of complete product are not available.
Do not discharge product unmonitored into the environment or into the drainage.

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Waste material must be disposed of in accordance with the Directive on waste 2008/98/EC as well as other national and local regulations. It is not possible to determine a waste code for this product in accordance with the European Waste Catalogue (EWC) since it is only possible to classify it according to how it is used by the customer. The waste code is to be determined within the EU in liaison with the waste-disposal operator.

Product

Disposal in an incineration plant in accordance with the regulations of the local authorities. Coordinate disposal with the disposal contractor/authorities if necessary.

Waste no. (recommended) 070108*
160507*

Contaminated packaging

Packaging that cannot be cleaned should be disposed of as for product.
Uncontaminated packaging may be taken for recycling.

Waste no. (recommended) 150110* packaging containing residues of or contaminated by hazardous substances

SECTION 14: Transport information

14.1 UN number or ID number

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.2 UN proper shipping name

Transport by land according to ADR/RID NO DANGEROUS GOODS

Inland navigation (ADN) NO DANGEROUS GOODS

Marine transport in accordance with IMDG NOT CLASSIFIED AS "DANGEROUS GOODS"

Air transport in accordance with IATA NOT CLASSIFIED AS "DANGEROUS GOODS"

14.3 Transport hazard class(es)

Transport by land according to ADR/RID not applicable

Inland navigation (ADN) not applicable

Marine transport in accordance with IMDG not applicable

Air transport in accordance with IATA not applicable

14.4 Packing group

Transport by land according to ADR/RID	not applicable
Inland navigation (ADN)	not applicable
Marine transport in accordance with IMDG	not applicable
Air transport in accordance with IATA	not applicable

14.5 Environmental hazards

Transport by land according to ADR/RID	no
Inland navigation (ADN)	no
Marine transport in accordance with IMDG	no
Air transport in accordance with IATA	no

14.6 Special precautions for user

Relevant information under SECTION 6 to 8.

14.7 Maritime transport in bulk according to IMO instruments

not applicable

SECTION 15: Regulatory information

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

EEC-REGULATIONS	2008/98/EC 2000/532/EC); 2010/75/EU; 2004/42/EC; (EC) 648/2004; (EC) 1907/2006 (REACH); (EU) 1272/2008; 75/324/EEC ((EC) 2016/2037); (EU) 2020/878; (EU) 2016/131; (EU) 517/2014
TRANSPORT-REGULATIONS	ADR (2021); IMDG-Code (2021, 40. Amdt.); IATA-DGR (2022)
NATIONAL REGULATIONS (GB):	EH40/2005 Workplace exposure limits (Second edition, published December 2011); UK REACH; GB CLP.
- Observe employment restrictions for people	Observe employment restrictions for young people. Observe employment restrictions for mothers-to-be and nursing mothers.
- VOC (2010/75/CE)	242 g/L

15.2 Chemical safety assessment

For the following substances of this preparation a chemical safety assessment has been carried out:
CAS 107-21-1. CAS 149-57-5

SECTION 16: Other information

16.1 Hazard statements (SECTION 3)

H361d Suspected of damaging the unborn child.

H373 May cause damage to organs through prolonged or repeated exposure.
H302 Harmful if swallowed.

16.2 Abbreviations and acronyms:

ADR = Accord européen relatif au transport international des marchandises Dangereuses par Route
RID = Règlement concernant le transport international ferroviaire de marchandises dangereuses
ADN = Accord européen relatif au transport international des marchandises dangereuses par voie de navigation intérieure
ATE = acute toxicity estimate
CAS = Chemical Abstracts Service
CLP = Classification, Labelling and Packaging
DMEL = Derived Minimum Effect Level
DNEL = Derived No Effect Level
EC50 = Median effective concentration
ECB = European Chemicals Bureau
EEC = European Economic Community
EINECS = European Inventory of Existing Commercial Chemical Substances
EL50 = Median effective loading
ELINCS = European List of Notified Chemical Substances
EmS = Emergency Schedules
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC-Code = International Code for the Construction and Equipment of Ships carrying Dangerous Chemicals in Bulk
IC50 = Inhibition concentration, 50%
IMDG = International Maritime Code for Dangerous Goods
IUCLID = International Uniform ChemicaL Information Database
IVIS = In vitro irritation score
LC50 = Lethal concentration, 50%
LD50 = Median lethal dose
LC0 = lethal concentration, 0%
LOAEL = lowest-observed-adverse-effect level
LL50 = Median lethal loading
LQ = Limited Quantities
MARPOL = International Convention for the Prevention of Marine Pollution from Ships
NOAEL = No Observed Adverse Effect Level
NOEC = No Observed Effect Concentration
PBT = Persistent, Bioaccumulative and Toxic substance
PNEC = Predicted No-Effect Concentration
REACH = Registration, Evaluation, Authorisation and Restriction of Chemicals
STP = Sewage Treatment Plant
TLV®/TWA = Threshold limit value – time-weighted average
TLV®STEL = Threshold limit value – short-time exposure limit
VOC = Volatile Organic Compounds
vPvB = very Persistent and very Bioaccumulative

16.3 Other information

Classification procedure

STOT RE 2: H373 May cause damage to organs through prolonged or repeated exposure. (Calculation method)

Modified position

SECTION 2 been added: Further hazards were not determined with the current level of knowledge.

SECTION 4 been added: Nausea, vomiting.

SECTION 4 been added: Consult a doctor immediately.

SECTION 4 been added: If breathing is irregular or stopped, administer artificial respiration.

SECTION 4 been added: If unconscious, place in recovery position and get medical attention immediately.

SECTION 6 been added: Remove persons to safety.

SECTION 7 been added: Do not smoke.