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

1.1. Product identifier

62052 Divinol Thermosure

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

Use of the substance/mixture

Heat transferring agent

1.3. Details of the supplier of the safety data sheet

Company name:	Zeller+Gmelin GmbH & Co. KG		
Street:	Schlossstr. 20		
Place:	D-73054 Eislingen		
Telephone:	+49 (0) 7161 / 802-0	Telefax:	+49 (0) 7161 / 802-290
e-mail:	info@zeller-gmelin.de		
Contact person:	Uwe Allmendinger	Telephone:	+49 (0) 7161 / 802-297
e-mail:	produktsicherheit@zeller-gmelin.de		
Internet:	www.zeller-gmelin.de		
Responsible Department:	Produktsicherheit / Product Safety		

1.4. Emergency telephone number:

Germany: +49 (0) 7161 / 802-400
In England and Wales: NHS Direct: 0845 4647 or 111 In Scotland: NHS 24 - 08454 24 24 24 In Republic of Ireland: 01 809 2166

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Acute toxicity: Acute Tox. 4
Reproductive toxicity: Repr. 2
Specific target organ toxicity - repeated exposure: STOT RE 2
Hazard Statements:
Harmful if swallowed.
Suspected of damaging the unborn child.
May cause damage to organs (kidneys) through prolonged or repeated exposure.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

ethanediol
sodium 2-ethylhexanoate

Signal word: Warning

Pictograms:

Hazard statements

H302	Harmful if swallowed.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs (kidneys) through prolonged or repeated exposure.

Precautionary statements

P260	Do not breathe vapour/aerosol.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+P312	IF SWALLOWED: Call a POISON CENTER/doctor if you feel unwell.
P330	Rinse mouth.

2.3. Other hazards

Results of PBT and vPvB assessment: not applicable.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Chemical characterization

Glycol-based mixture.

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	GHS Classification			
107-21-1	ethanediol			25 - <= 100 %
	203-473-3	603-027-00-1	01-2119456816-28	
	Acute Tox. 4, STOT RE 2; H302 H373			
19766-89-3	sodium 2-ethylhexanoate			2.5 - < 5 %
	243-283-8		01-2119972937-17	
	Repr. 2; H361d			

Full text of H and EUH statements: see section 16.

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

When in doubt or if symptoms are observed, get medical advice. If unconscious place in recovery position and seek medical advice. Remove contaminated, saturated clothing immediately.

After inhalation

Remove casualty to fresh air and keep warm and at rest.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

If swallowed, rinse mouth with water (only if the person is conscious). Let water be drunken in little sips (dilution effect). Call a physician immediately. Do NOT induce vomiting.

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

When in doubt or if symptoms are observed, get medical advice.

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

No information available.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

alcohol resistant foam, Extinguishing powder, Carbon dioxide (CO2).

Unsuitable extinguishing media

Full water jet.

5.2. Special hazards arising from the substance or mixture

Hazardous decomposition products: Carbon monoxide Carbon dioxide (CO2). Do not inhale explosion and combustion gases.

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Do not allow to enter into soil/subsoil.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

See protective measures under point 7 and 8.

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Clean contaminated articles and floor according to the environmental legislation.

6.3. Methods and material for containment and cleaning up

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

6.4. Reference to other sections

See protective measures under point 7 and 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Use personal protection equipment. Do not eat, drink or smoke when using this product. Provide fresh air. Handle and open container with care. Conditions to avoid: generation/formation of aerosols.

Advice on protection against fire and explosion

No special measures are necessary.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Protect against: Frost. Keep away from heat. Protect against direct sunlight. Keep container tightly closed in a cool, well-ventilated place.

7.3. Specific end use(s)

Observe technical data sheet.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
107-21-1	Ethane-1,2-diol, particulate	-	10		TWA (8 h)	WEL

DNEL/DMEL values

CAS No	Substance		
DNEL type	Exposure route	Effect	Value
107-21-1	ethanediol		
Worker DNEL, long-term	inhalation	local	35 mg/m³
Consumer DNEL, long-term	inhalation	local	7 mg/m³
Consumer DNEL, long-term	dermal	systemic	53 mg/kg bw/day
Worker DNEL, long-term	dermal	systemic	106 mg/kg bw/day

PNEC values

CAS No	Substance	
Environmental compartment		Value
107-21-1	ethanediol	
Freshwater		10 mg/l
Soil		1,53 mg/kg
Freshwater sediment		20,9 mg/kg
Marine water		1 mg/l
Micro-organisms in sewage treatment plants (STP)		199,5 mg/l

8.2. Exposure controls

Appropriate engineering controls

See chapter 7. No additional measures necessary.

Protective and hygiene measures

When using do not eat, drink, smoke, sniff.

Eye/face protection

Eye glasses with side protection.

Hand protection

Wear suitable gloves. Recommended glove articles: DIN EN 374. Suitable material: NBR (Nitrile rubber). Breakthrough time (maximum wearing time): > 480 min (Thickness of the glove material: 0.4 mm). Breakthrough times and swelling properties of the material must be taken into consideration. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves. Barrier creams can help protecting exposed skin areas. In no case should they be used after contact.

Skin protection

Protective clothing.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required. When splashes or fine mist form, a permitted breathing apparatus suitable for these purposes must be used. Suitable respiratory protection apparatus: Filtering Half-face mask (DIN EN 149), e.g. FFA P / FFP3.

Environmental exposure controls

Do not allow to enter into surface water or drains.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	Liquid	
Colour:	colourless	
Odour:	mild	
		Test method
pH-Value (at 20 °C):	8,6	
Changes in the physical state		
Melting point:	not determined	
Initial boiling point and boiling range:	> 100 °C	
Pour point:	< -15 °C	DIN ISO 3016
Flash point:	> 120 °C	
Lower explosion limits:	3,2 vol. %	
Upper explosion limits:	43 vol. %	
Ignition temperature:	not determined	
Decomposition temperature:	No information available.	
Vapour pressure: (at 20 °C)	< 0,1 hPa	

Density (at 20 °C):	1,11 g/cm³	DIN EN ISO 12185
Water solubility:	miscible	
Partition coefficient:	not determined	
Viscosity / dynamic:	not determined	
Viscosity / kinematic: (at 40 °C)	10 mm²/s	ASTM D 7042
Flow time:	not determined	
Vapour density:	not determined	
Evaporation rate:	not determined	

9.2. Other information

No information available.

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

No information available.

10.3. Possibility of hazardous reactions

No hazardous reaction when handled and stored according to provisions.

10.4. Conditions to avoid

Heat.

10.5. Incompatible materials

No information available.

10.6. Hazardous decomposition products

No information available.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity

Harmful if swallowed.

ATEmix calculated

ATE (oral) 1682,4 mg/kg

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
107-21-1	ethanediol				
	oral	LD50 1600 mg/kg		Practical experience/human evidence	
	dermal	LD50 3500 mg/kg	Mouse		

Irritation and corrosivity

Based on available data, the classification criteria are not met.

Sensitising effects

Based on available data, the classification criteria are not met.

Carcinogenic/mutagenic/toxic effects for reproduction

Suspected of damaging the unborn child. (sodium 2-ethylhexanoate)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: Based on available data, the classification criteria are not met.

STOT-single exposure

Based on available data, the classification criteria are not met.

STOT-repeated exposure

May cause damage to organs (kidneys) through prolonged or repeated exposure. (ethanediol)

Aspiration hazard

Based on available data, the classification criteria are not met.

Practical experience

Other observations

Keeping to the general worker's protection rules and the industrial hygienics, there is no risk in handling this product through the personnel.

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] | [d]	Species	Source	Method
107-21-1	ethanediol					
	Acute fish toxicity	LC50 72860 mg/l	96 h	Pimephales promelas (fathead minnow)		
	Acute algae toxicity	ErC50 6500-13000 mg/l	96 h	Selenastrum capricornutum		
	Acute crustacea toxicity	EC50 > 100 mg/l	48 h	Daphnia magna (Big water flea)		
	Fish toxicity	NOEC 15380 mg/l	7 d	Pimephales promelas (fathead minnow)		
	Crustacea toxicity	NOEC 8590 mg/l	7 d	Ceriodaphnia Dubia		

12.2. Persistence and degradability

There are no data available on the mixture itself.

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
107-21-1	ethanediol			
	Biodegradation	90-100	10	
	OECD 301A/ ISO 7827/ EEC 92/69/V, C.4-A			

12.3. Bioaccumulative potential

There are no data available on the mixture itself.

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
107-21-1	ethanediol	-1,36

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Do not allow to enter into surface water or drains. This material and its container must be disposed of in a safe way. Waste disposal according to EC directives 75/442/EEC and 91/689/EEC in the corresponding versions, covering waste and dangerous waste.

Waste disposal number of waste from residues/unused products

140603 WASTE ORGANIC SOLVENTS, REFRIGERANTS AND PROPELLANTS (EXCEPT 07 AND 08); waste organic solvents, refrigerants and foam/aerosol propellants; other solvents and solvent mixtures; hazardous waste

Contaminated packaging

Non-contaminated packages may be recycled. Consult the appropriate local waste disposal expert about waste disposal.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

Marine transport (IMDG)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.
Marine pollutant:	NO

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	No dangerous good in sense of this transport regulation.
14.2. UN proper shipping name:	No dangerous good in sense of this transport regulation.
14.3. Transport hazard class(es):	No dangerous good in sense of this transport regulation.
14.4. Packing group:	No dangerous good in sense of this transport regulation.

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

No data available

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

No data available

SECTION 15: Regulatory information

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

EU regulatory information

2010/75/EU (VOC): 0 %

National regulatory information

Water contaminating class (D): 1 - slightly water contaminating

15.2. Chemical safety assessment

Chemical safety assessments for substances in this mixture were not carried out.

SECTION 16: Other information

Changes

This data sheet contains changes from the previous version in section(s): 1,2,4,5,6,7,8,9,10,11,12,13,14,15.

Abbreviations and acronyms

ADR: Accord européen relatif au transport international des marchandises dangereuses par route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement concernant le transport international ferroviaire des marchandises dangereuses (Regulations concerning the International Carriage of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
CAS: Chemical Abstracts Service (a division of the American Chemical Society)
DNEL/DMEL: Derived No-Effect Level / Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
WEL (UK): Workplace Exposure Limits
TWA (EC): Time-Weighted Average
STEL (EC): Short Term Exposure Limit
ATE: Acute Toxicity Estimate
LD50: Lethal Dose, 50% (median lethal dose)
LC50: Lethal Concentration, 50% (median lethal concentration)
EC50: half maximal Effective Concentration
ErC50: EC50 in terms of reduction of growth rate
AwSV: Verordnung über Anlagen zum Umgang mit wassergefährdenden Stoffen
VwVwS: Verwaltungsvorschrift wassergefährdende Stoffe

Relevant H and EUH statements (number and full text)

H302	Harmful if swallowed.
H361d	Suspected of damaging the unborn child.
H373	May cause damage to organs (kidneys) through prolonged or repeated exposure.
H373	May cause damage to organs through prolonged or repeated exposure.

Further Information

Safety Data Sheet according to COMMISSION REGULATION (EU) 2015/830 of 28 May 2015 amending Regulation (EC) No 1907/2006 of the European Parliament and of the Council on the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH).

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. 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.

(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)