Safety Data Sheet

according to Regulation (EC) No 1907/2006

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

1.1. Product identifier

PT28

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

Use of the substance/mixture

Accelerator

Uses advised against

Any non-intended use.

1.3. Details of the supplier of the safety data sheet

Company name:	Hepf GmbH
Street:	Dorf 69
Place:	A-6342 Niederndorf
Telephone:	+43 5373 570033
e-mail:	info@hepf.at
Contact person:	Stefan Thaler
e-mail:	Stefan.Thaler@hepf.at
Internet:	www.hepf.at
Responsible Department:	Dr. Gans-Eichler e-mail: info@tge-consult.de Chemieberatung GmbH Tel.: +49 (0)251/924520-60 Raesfeldstr. 22 www.tge-consult.de D-48149 Münster

1.4. Emergency telephone number:

Vergiftungsinformationszentrale (VIZ) Wien: +43 (0) 1 406 43 43

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No. 1272/2008

Hazard categories:
Flammable liquid: Flam. Liq. 2
Serious eye damage/eye irritation: Eye Irrit. 2
Specific target organ toxicity - single exposure: STOT SE 3
Hazard Statements:
Highly flammable liquid and vapour.
Causes serious eye irritation.
May cause drowsiness or dizziness.

2.2. Label elements

Regulation (EC) No. 1272/2008

Hazard components for labelling

propan-2-ol; isopropyl alcohol; isopropanol

Signal word: Danger

Pictograms:

Hazard statements

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.

Precautionary statements

P101	If medical advice is needed, have product container or label at hand.
P102	Keep out of reach of children.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P235	Keep cool.
P264	Wash hands thoroughly after handling.
P271	Use only outdoors or in a well-ventilated area.
P405	Store locked up.
P501	Dispose of contents/container to local/regional/national/international regulations.

2.3. Other hazards

In use, may form flammable/explosive vapour-air mixture.
The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

SECTION 3: Composition/information on ingredients

3.2. Mixtures

Hazardous components

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			90-<100 %
	200-661-7	603-117-00-0		
	Flam. Liq. 2, Eye Irrit. 2, STOT SE 3; H225 H319 H336			
99-97-8	N,N-dimethyl-p-toluidine			<2 %
	202-805-4	612-056-00-9		
	Acute Tox. 2, Acute Tox. 3, Acute Tox. 3, STOT RE 2, Aquatic Chronic 3; H330 H311 H301 H373 H412			

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

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH).

SECTION 4: First aid measures

4.1. Description of first aid measures

General information

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Take off immediately all contaminated clothing.
First aider: Pay attention to self-protection!

After inhalation

Remove person to fresh air and keep comfortable for breathing. In case of respiratory tract irritation, consult a physician.

After contact with skin

Take off immediately all contaminated clothing. Wash with plenty of water. In case of skin irritation, seek medical treatment.

After contact with eyes

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.

After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. In all cases of doubt, or when symptoms persist, seek medical advice.

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

Inhalation causes headache/nausea.

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

Treat symptomatically.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media

Carbon dioxide (CO_2). Dry extinguishing powder. alcohol resistant foam. Atomized water.

Unsuitable extinguishing media

High power water jet.

5.2. Special hazards arising from the substance or mixture

Highly flammable liquid and vapour. The vapour of the product is heavier than air and may accumulate below ground level, in pits, channels and basements in higher concentration. Vapors form explosive mixtures with air. Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO_2).

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.In case of fire and/or explosion do not breathe fumes.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water. Use water spray jet to protect personnel and to cool endangered containers.
In case of major fire and large quantities: Evacuate area. Fight fire remotely due to the risk of explosion.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Remove persons to safety. Remove all sources of ignition. Ventilate affected area.
Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes.
Wear personal protection equipment. (See section 8.)

6.2. Environmental precautions

Do not allow to enter into surface water or drains. Danger of explosion! Cover drains. Prevent spread over a wide area (e.g. by containment or oil barriers). In case of gas escape or of entry into waterways, soil or drains, inform the responsible authorities.

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). Ventilate affected area.
Treat the recovered material as prescribed in the section on waste disposal.
Clean contaminated objects and areas thoroughly observing environmental regulations.

6.4. Reference to other sections

Safe handling: see section 7
Personal protection equipment: see section 8
Disposal: see section 13

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling

Provide adequate ventilation as well as local exhaustion at critical locations.
Do not breathe gas/vapour/aerosol. Avoid contact with skin, eyes and clothes.

Wear suitable protective clothing. (See section 8.)

Advice on protection against fire and explosion

Keep away from sources of ignition. - No smoking. Take precautionary measures against static discharges. Flammable vapours can accumulate in head space of closed systems. In use, may form flammable/explosive vapour-air mixture. Heating causes rise in pressure with risk of bursting.

Further information on handling

General protection and hygiene measures: See section 8.

7.2. Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed in a cool, well-ventilated place. Protect against direct sunlight.
Ensure adequate ventilation of the storage area.
Make sure spills can be contained (e.g. sump pallets or kerbed areas).

Advice on storage compatibility

Do not store together with: Gas. Explosives. Flammable solids. Pyrophoric liquids and solids. Self-heating substances and mixtures. Substances and mixtures which, in contact with water, emit flammable gases. Oxidizing liquids. Oxidizing solids. ammonium nitrate. Self-reactive substances and mixtures. Organic peroxides. Non-combustible toxic substances. Radioactive substances. Infectious substances.

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorbtion of humidity.
Protect against: UV-radiation/sunlight. heat. moisture. frost.
storage temperature: 30°C

7.3. Specific end use(s)

refer to chapter 1.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Exposure limits (EH40)

CAS No	Substance	ppm	mg/m³	fibres/ml	Category	Origin
67-63-0	Propan-2-ol	400	999		TWA (8 h)	WEL
		500	1250		STEL (15 min)	WEL

8.2. Exposure controls



Appropriate engineering controls

Provide adequate ventilation as well as local exhaustion at critical locations.

Protective and hygiene measures

The usual precautions for handling chemicals should be considered.
Keep away from food, drink and animal feedingstuffs.
Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Protect skin by using skin protective cream. Take off contaminated clothing and wash it before reuse.

Eye/face protection

Recommended eye protection brand: Tightly sealed safety glasses. (DIN EN 166)

Hand protection

In case of prolonged or frequently repeated skin contact: Wear suitable gloves.

Suitable material: Butyl rubber.
Thickness of glove material: 0,5 mm
Breakthrough time >= 480 min. penetration time (maximum wearing period): ~ 120 min. (estimated)
In the case of wanting to use the gloves again, clean them before taking off and air them well. Before using check leak tightness / impermeability.
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.
The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Skin protection

Wear fire/flame resistant/retardant clothing.
Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500.

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.
Respiratory protection necessary at:
exceeding exposure limit values
Insufficient ventilation.
Suitable respiratory protective equipment: gas filtering equipment (EN 141). Type: A
The filter class must be suitable for the maximum contaminant concentration (gas/vapour/aerosol/particulates) that may arise when handling the product. If the concentration is exceeded, self-contained breathing apparatus must be used. Observe the wear time limits according GefStoffV in combination with the rules for using respiratory protection apparatus (BGR 190).

Environmental exposure controls

Do not allow uncontrolled discharge of product into the environment.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state:	liquid	
Colour:	not determined	
Odour:	characteristic	
pH-Value:		not determined

Changes in the physical state

Melting point:	not applicable
Initial boiling point and boiling range:	82-92 °C
Flash point:	12 °C

Explosive properties

In use, may form flammable/explosive vapour-air mixture.

Lower explosion limits:	not determined
Upper explosion limits:	not determined
Ignition temperature:	not determined
Decomposition temperature:	not determined

Oxidizing properties

none.

Vapour pressure: (at 20 °C)	not determined
Density:	0,79 g/cm³
Water solubility:	miscible.

Solubility in other solvents

not determined

Partition coefficient:	not determined
Viscosity / dynamic: (at 20 °C)	not determined
Viscosity / kinematic: (at 20 °C)	not determined
Flow time:	not determined
Vapour density:	not determined
Evaporation rate:	not determined
Solvent separation test:	not determined
Solvent content:	not determined

9.2. Other information

Solid content:	not determined

SECTION 10: Stability and reactivity

10.1. Reactivity

No information available.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Keep away from heat. Ignition hazard! Do not store at temperatures over: 30°C. Avoid freezing.
In use may form flammable/explosive vapour-air mixture.
Heating causes rise in pressure with risk of bursting.

10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong. Strong acid. strong alkalis. Acetaldehyde. Chlorine. Aluminium. Ethylene oxide. Sulfuric acid. Isocyanates. Phosgene. Amines. halogens. Anhydrides.

10.6. Hazardous decomposition products

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO_2).

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Toxicocinetics, metabolism and distribution

No data available.

Acute toxicity

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

CAS No	Chemical name				
	Exposure route	Dose	Species	Source	Method
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol				
	oral	LD50 >5000 mg/kg	Rat	ECHA Dossier	
	dermal	LD50 >5000 mg/kg	Rabbit	ECHA Dossier	

99-97-8	N,N-dimethyl-p-toluidine					
	oral	LD50 mg/kg	139	Rat	ECHA Dossier	
	dermal	LD50 mg/kg	[>2000]	Rabbit	ECHA Dossier	
	inhalative vapour	ATE	0,5 mg/l			
	inhalative aerosol	ATE	0,05 mg/l			

Irritation and corrosivity

Causes serious eye irritation.
Skin corrosion/irritation: 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

Based on available data, the classification criteria are not met.
propan-2-ol; isopropyl alcohol; isopropanol:
OECD Guideline 471 (Bacterial Reverse Mutation Assay) = negative., AllgK267153: ECHA Dossier; OECD Guideline 474 (Mammalian Erythrocyte Micronucleus Test) = negative., Literature information: ECHA Dossier; No indications of human carcinogenicity exist., Literature information: ECHA Dossier; Reproductive toxicity: Method: OECD Guideline 415 (One-Generation Reproduction Toxicity Study); Species: Rat ; Result: NOAEL = 853 mg/kg; Literature information: ECHA Dossier; Developmental toxicity/teratogenicity: Method: (oral.) OECD Guideline 414 (Prenatal Developmental Toxicity Study); Species: Rabbit ; Result: NOAEL = 480 mg/kg; Literature information: ECHA Dossier

STOT-single exposure

May cause drowsiness or dizziness. (propan-2-ol; isopropyl alcohol; isopropanol)

STOT-repeated exposure

Based on available data, the classification criteria are not met.
propan-2-ol; isopropyl alcohol; isopropanol:
Chronic inhalative toxicity (Rat): NOAEC = 5000 ppm (OECD 451), Literature information: ECHA Dossier

N,N-dimethyl-p-toluidine:
In-vitro mutagenicity: Method: bacterial reverse mutation assay (e.g. Ames test) Result: negative. ; Literature information: ECHA Dossier

Aspiration hazard

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

Specific effects in experiment on an animal

No data available.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name						
	Aquatic toxicity	Dose		[h] | [d]	Species	Source	Method
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol						
	Acute fish toxicity	LC50 mg/l	9640	96 h	Pimephales promelas	ECHA Dossier	OECD Guideline 203
	Acute algae toxicity	ErC50 mg/l	1800		Scenedesmus quadricauda	ECHA Dossier	
	Acute crustacea toxicity	EC50 mg/l	>10000	48 h	Daphnia magna (24h)	ECHA Dossier	OECD Guideline 202
99-97-8	N,N-dimethyl-p-toluidine						
	Acute fish toxicity	LC50	(46) mg/l	96 h	Pimephales promelas	ECHA Dossier	

	Acute algae toxicity	ErC50	(22) mg/l	72 h	Chlorella pyrenoidosa	ECHA Dossier	weight of evidence
	Acute crustacea toxicity	EC50 mg/l	(13,7)	48 h	Daphnia magna	ECHA Dossier	weight of evidence

12.2. Persistence and degradability

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol			
	EU Method C.5/ EU Method C.6	53%	5	ECHA Dossier
	Easily biodegradable (concerning to the criteria of the OECD)			
99-97-8	N,N-dimethyl-p-toluidine			
	weight of evidence	<1%	28	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			

12.3. Bioaccumulative potential

Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
67-63-0	propan-2-ol; isopropyl alcohol; isopropanol	0,05
99-97-8	N,N-dimethyl-p-toluidine	2,81

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

12.6. Other adverse effects

No data available.

Further information

Do not allow to enter into surface water or drains.

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Advice on disposal

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to EAKV, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process. Control report for waste code/ waste marking according to EAKV:

Waste disposal number of waste from residues/unused products

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

Waste disposal number of used product

160305 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; off-specification batches and unused products; organic wastes containing hazardous substances; hazardous waste

Waste disposal number of contaminated packaging

150110 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); packaging containing residues of or contaminated by hazardous substances; hazardous waste

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

SECTION 14: Transport information

Land transport (ADR/RID)

14.1. UN number:	UN 1219
14.2. UN proper shipping name:	ISOPROPANOL (ISOPROPYL ALCOHOL)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3

Classification code:	F1
Special Provisions:	601
Limited quantity:	1 L
Excepted quantity:	E2
Transport category:	2
Hazard No:	33
Tunnel restriction code:	D/E

Inland waterways transport (ADN)

14.1. UN number:	UN 1219
14.2. UN proper shipping name:	ISOPROPANOL (ISOPROPYL ALCOHOL)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3

Classification code:	F1
Special Provisions:	601
Limited quantity:	1 L
Excepted quantity:	E2

Marine transport (IMDG)

14.1. UN number:	UN 1219
14.2. UN proper shipping name:	ISOPROPANOL (ISOPROPYL ALCOHOL)
14.3. Transport hazard class(es):	3
14.4. Packing group:	II
Hazard label:	3

Marine pollutant:	NO
Special Provisions:	-
Limited quantity:	1 L
Excepted quantity:	E2
EmS:	F-E, S-D

Air transport (ICAO-TI/IATA-DGR)

14.1. UN number:	UN 1219

14.2. UN proper shipping name: ISOPROPANOL (ISOPROPYL ALCOHOL)

14.3. Transport hazard class(es): 3

14.4. Packing group: II

Hazard label: 3

Special Provisions:	A180
Limited quantity Passenger:	1 L
Passenger LQ:	Y341
Excepted quantity:	E2
IATA-packing instructions - Passenger:	353
IATA-max. quantity - Passenger:	5 L
IATA-packing instructions - Cargo:	364
IATA-max. quantity - Cargo:	60 L

14.5. Environmental hazards

ENVIRONMENTALLY HAZARDOUS: no

14.6. Special precautions for user

See section 8.

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

not relevant.

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):	not determined
2004/42/EC (VOC):	not determined
Information according to 2012/18/EU (SEVESO III):	P5c FLAMMABLE LIQUIDS

Additional information

The mixture is classified as hazardous according to regulation (EC) No 1272/2008 [CLP].
REACH 1907/2006 Appendix XVII, No (mixture): 3

National regulatory information

Employment restrictions:	Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC).
Water contaminating class (D):	2 - clearly water contaminating

15.2. Chemical safety assessment

For the following substances of this mixture a chemical safety assessment has been carried out:

SECTION 16: Other information

Changes

Rev. 1.00; Initial release: 27.11.2017

Abbreviations and acronyms

ADR: Accord européen sur le transport des marchandises dangereuses par Route
CAS Chemical Abstracts Service
DNEL: Derived No Effect Level
IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)
ICAO: International Civil Aviation Organization
ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect level
NTP: National Toxicology Program
N/A: not applicable
OSHA: Occupational Safety and Health Administration
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
SARA: Superfund Amendments and Reauthorization Act
SVHC: substance of very high concern
TRGS Technische Regeln fuerGefahrstoffe
TSCA: Toxic Substances Control Act
VOC: Volatile Organic Compounds
VwVwS: Verwaltungsvorschrift wassergefaehrdender Stoffe
WGK: Wassergefaehrdungsklasse

Classification for mixtures and used evaluation method according to Regulation (EC) No. 1272/2008 [CLP]

Classification	Classification procedure
Flam. Liq. 2; H225	On basis of test data
Eye Irrit. 2; H319	Calculation method
STOT SE 3; H336	Calculation method

Relevant H and EUH statements (number and full text)

H225	Highly flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H319	Causes serious eye irritation.
H330	Fatal if inhaled.
H336	May cause drowsiness or dizziness.
H373	May cause damage to organs through prolonged or repeated exposure.
H412	Harmful to aquatic life with long lasting effects.

Further Information

Classification according EC regulation 1272/2008 (CLP): - Classification procedure:
Health hazards: Calculation method.
Environmental hazards: Calculation method.
Physical hazards: On basis of test data and / or calculated and / or estimated.

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.)