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

1.1. Product identifier

printisol

UFI NM19-XRS2-4V3D-FS01

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

Relevant identified uses: Release agent
Uses advised against: Private households (= general public).

1.3. Details of the supplier of the safety data sheet

Manufacturer
pro3dure medical GmbH

Am Burgberg 13
D 58642 Iserlohn

Telephone +49 (0)2374 920050-10
Telefax:

Supplier
pro3dure medical GmbH

Am Burgberg 13
D 58642 Iserlohn

Telephone +49 (0)2374 920050-10
Telefax:

Information contact
pro3dure medical GmbH

Information telephone +49 (0)2374 920050-10
Information telefax
E-mail (competent person) info@pro3dure.com
Website www.pro3dure.com

1.4. Emergency telephone number

pro3dure medical GmbH
This number is serviced during office hours.

Telephone +49 (0)2374 920050-10

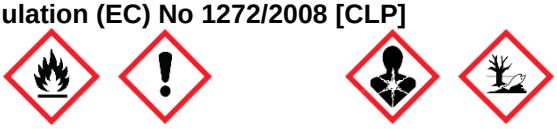
SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Regulation (EC) No 1272/2008:
Flam. Liq. 2, H225; Skin Irrit. 2, H315; STOT SE 3, H336; Asp. Tox. 1, H304; Aqu. Akut 1, H400; Aqu. Chron. 1, H410

2.2. Label elements

Classification according to Regulation (EC) No 1272/2008 [CLP]
Hazard pictograms



GHS02, GHS07, GHS08, GHS09
Signal word: Danger

Hazard statements:

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Precautionary statements:

P201	Obtain special instructions before use.
P210	Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P233	Keep container tightly closed.
P240	Ground and bond container and receiving equipment.
P242	Use non-sparking tools.
P243	Take action to prevent static discharges.
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P301+310.1	IF SWALLOWED: Immediately call a POISON CENTER.
P301+310.2	IF SWALLOWED: Immediately call a doctor.
P302+352.1	IF ON SKIN: Wash with plenty of soap and water.
P303+361+353	IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].
P304+340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P331	Do NOT induce vomiting.
P332+313	If skin irritation occurs: Get medical advice/attention.
P362+364	Take off contaminated clothing and wash it before reuse.
P370+378.3	In case of fire: Use foam to extinguish.
P391	Collect spillage.
P403+233	Store in a well-ventilated place. Keep container tightly closed.
P403+235	Store in a well-ventilated place. Keep cool.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local and national regulations.

Special labelling of particular preparations:
none

2.3. Other hazards

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.
No endocrine-disrupting properties known (see section 12)
CA Proposition 65 : Substance(s) not listed.

SECTION 3: Composition / information on ingredients

3.1. Substances

not applicable

3.2. Mixtures

Mixture with, among others, the following ingredients and other non-hazardous admixtures

Composition/information on ingredients

Substance:	CAS-No.:	REACH-no.:	Concentration:	Classification: EC 1272/2008 (CLP):	M, ATE, Note
Petroleum benzine 60-95		01-2119475514-35-XXXX	<65	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Chronic 2, H411	M = 0 ATE (dermal) = > 2.920 mg/kg ATE (oral) = > 5.840 mg/kg ATE (inhalativ) = > 25,2 mg/l
n-Heptane	142-82-5	01-2119457603-38-XXXX	<60	Flam. Liq. 2, H225; Asp. Tox. 1, H304; Skin Irrit. 2, H315; STOT SE 3, H336; Aquatic Acute 1, H400; Aquatic Chronic 1, H410	M = 0 ATE (dermal) = > 2000 mg/kg ATE (oral) = > 5000 mg/kg ATE (inhalativ) = > 29,9 mg/l

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

SECTION 4: First aid measures

4.1. Description of first aid measures

General information: In case of accident or unwellness, seek medical advice immediately Remove contaminated, saturated clothing immediately. When in doubt or if symptoms are observed, get medical advice.

In case of inhalation: Provide fresh air. Seek medical attention if problems persist.

Following skin contact: After contact with skin, wash immediately with plenty of water and soap. In case of skin irritation, consult a physician.

After eye contact: IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Seek medical attention if problems persist.

After ingestion: Rinse mouth thoroughly with water. Do NOT induce vomiting. Call a physician immediately. Call a physician immediately.

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

Vapours may cause drowsiness and dizziness. Anaesthetic state. Aspiration hazard.

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

First Aid, decontamination, treatment of symptoms.

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media Water fog. High power water jet. Carbon dioxide (CO2). Foam. dry extinguishing powder. ABC-powder BC-powder alcohol resistant foam Carbon dioxide (CO2) ABC-powder alcohol resistant foam BC-powder Nitrogen Carbon dioxide (CO2) ABC-powder alcohol resistant foam BC-powder Nitrogen Carbon dioxide (CO2)

Unsuitable extinguishing media Water spray jet Full water jet Excess water Excess water Full water jet Water spray jet Excess water Full water jet Water spray jet

5.2. Special hazards arising from the substance or mixture

In case of fire may be liberated: Carbon dioxide (CO2). Carbon monoxide.

5.3. Advice for firefighters

General information

Move undamaged containers from immediate hazard area if it can be done safely. Use water spray jet to protect personnel and to cool endangered containers. Use water spray jet to protect personnel and to cool endangered containers.

Special protective equipment for fire-fighters:

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

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures
Use personal protection equipment. Remove persons to safety. Eliminate all ignition sources if safe to do so. Provide adequate ventilation.

6.2. Environmental precautions
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

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). Use only antistatically equipped (spark-free) tools. Treat the recovered material as prescribed in the section on waste disposal.

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
Advices on safe handling
When using do not eat, drink, smoke, sniff. Use only in well-ventilated areas. All work processes must always be designed so that the following is excluded: Inhalation

Precautions against fire and explosion:
This material is combustible and can be ignited by heat, sparks, flames, or other sources of ignition (e.g. static electricity, pilot lights, or mechanical/electrical equipment).

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.

Hints on joint storage
Observe regulations / technical rules for the joint storage of flammable liquids.

7.3. Specific end use(s)
Observe instructions for use.

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

occupational exposure limit value

Substance:	CAS-No.:		Source:	Occupational exposure limit value:[ppm]	Occupational exposure limit value:[mg/m³]	Limitation of exposure peaks:	Remark:
n-Heptane	142-82-5	EN	2000/39/EC	500	2.085		TWA

Substance with a common (EC) occupational exposure limit value.

Substance:	CAS-No.:		Source:	Occupational exposure limit value:[ppm]	Occupational exposure limit value:[mg/m³]	Limitation of exposure peaks:	Remark:

DNEL-/PNEC-values

DNEL value

Substance:	CAS-No.:	DNEL/DMEL
Petroleum benzine 60-95		worker dermal long-term, systemic 773 mg/kg bw/day population dermal long-term, systemic 699 mg/kg bw/day worker inhalative long-term, systemic 2035 mg/m³ population inhalative long-term, systemic 608 mg/m³ population oral long-term, systemic 699 mg/kg bw/day
n-Heptane	142-82-5	population inhalative long-term, systemic 300 mg/m³ worker inhalative long-term, systemic 2085 mg/m³

PNEC Value

Substance:	CAS-No.:	PNEC

Additional information

-

8.2. Exposure controls

Occupational exposure controls:

Provide adequate ventilation as well as local exhaustion at critical locations. Technical measures and the application of suitable work processes have priority over personal protection equipment.

General protection and hygiene measures:

When using do not eat, drink, smoke, sniff. Use only in well-ventilated areas. All work processes must always be designed so that the following is as low as possible: Inhalation Take precautionary measures against static discharge.

Personal protection equipment

Only wear fitting, comfortable and clean protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection. Wear breathing apparatus if exposed to vapours/dusts/aerosols. Suitable respiratory protection apparatus: Combination filter device (DIN EN 141). Gas filter A, color code brown.

Hand protection

Tested protective gloves are to be worn: DIN-/EN-Norms: EN ISO 374 , Suitable material: NBR (Nitrile rubber), FKM (fluoro rubber). Thickness of the glove material, Breakthrough times and swelling properties of the material must be taken into consideration.

Eye/face protection

Eye glasses with side protection

Body protection:

For the protection against direct skin contact, body protective clothing is essential (in addition to the usual working clothes). Only wear fitting, comfortable and clean protective clothing. Barrier creams are not substitutes for body protection.

Environmental exposure controls

refer to chapter 7. No further action is necessary.

Consumer exposure controls

refer to chapter 7. No further action is necessary.

Exposure Scenario:

Skin contact Inhalation

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	
Physical state:	Liquid
Colour:	colourless
Odour:	characteristic
Odour threshold:	-

Safety relevant basis data

	parameter	Value	unit	Remark
Melting point/freezing point:	<	-25	°C	Petroleum benzine 60/95
Initial boiling point and boiling range:		60-95	°C	Petroleum benzine 60/95
Flammability:				not determined
lower flammability or explosive limits:		0.6	Vol-%	n-Heptane
Upper flammability or explosive limits:		7	Vol-%	n-Heptane
Flash point:	<	-10	°C	Petroleum benzine 60/95
Ignition temperature:	>	200	°C	@ 1013 hPa n-Heptane
Decomposition temperature:				not determined
pH:				not determined
Kinematic viscosity:				not determined
Water solubility (g/L):				
Partition coefficient: n-octanol/water:	Log KOW	2.96-4.5		not determined , literature value
Vapour pressure:	approx.	72	hPa	calculated.
Density:		0.8	g/cm³	Petroleum benzine 60/95
Relative density:				not determined
Particle properties:				not determined

9.2. Other information
none

SECTION 10: Stability and reactivity

10.1. Reactivity
Vapours can form explosive mixtures with air. Gases / vapours, highly flammable .

10.2. Chemical stability
The substance is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions
Ignition hazard . Violent reaction with: Oxidizing agent , Chlorine .

10.4. Conditions to avoid
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

10.5. Incompatible materials
plastic and rubber

10.6. Hazardous decomposition products
In case of fire may be liberated: Carbon dioxide (CO2) . Carbon monoxide .

SECTION 11: Toxicological information

11.1. Information on toxicological effects

There are no data available on the preparation/mixture itself. Data apply to the component with the highest toxicological risk.

M-factor: -
Acute toxicity (oral): > 5000 mg/kg
Acute toxicity (dermal): > 2000 mg/kg
Acute toxicity (inhalative): > 23,3 mg/kg

Acute toxicity

Substance:	CAS-No.:	Toxicological information
n-Heptane	142-82-5	LC50 inhalation (rat, 4 h) > 23,3 mg/L LD50 dermal (rat) > 2800 mg/kg LD50 oral (rat) > 5000 mg/kg LC50 inhalation (rat, 4 h) > 29,3 mg/L LD50 dermal (rabbit) > 2000 mg/kg
Petroleum benzine 60-95		LD50 oral (rat) > 5840 mg/kg LC50 inhalation (rat, 4 h) > 25,2 mg/L LD50 dermal (rat) > 2920 mg/kg

Skin corrosion/irritation:
Has degreasing effect on the skin. Causes skin irritation. Causes skin irritation.

Serious eye damage/irritation:
Based on available data, the classification criteria are not met. (based on the components)

Respiratory or skin sensitisation:
Based on available data, the classification criteria are not met. (based on the components)

CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)
Carcinogenicity:
There are no data available on the preparation/mixture itself. Based on available data, the classification criteria are not met. (based on the components)
Germ cell mutagenicity:
There are no data available on the preparation/mixture itself. Based on available data, the classification criteria are not met. (based on the components)
Reproductive toxicity:
There are no data available on the preparation/mixture itself. Based on available data, the classification criteria are not met. (based on the components)

STOT-single exposure:
May cause drowsiness or dizziness.

STOT-repeated exposure:
There are no data available on the preparation/mixture itself. Based on available data, the classification criteria are not met. (based on the components)

Aspiration hazard:
Vapours may cause drowsiness and dizziness. May be fatal if swallowed and enters airways. Subsequent observance for pneumonia and lung oedema.

SECTION 12: Ecological information

12.1. Toxicity

There are no data available on the mixture itself.

Ecotoxicity

Substance:	CAS-No.:	Ecotoxicity
n-Heptane	142-82-5	EC50 (aquatic invertebrates, 48h) 0,23 mg/l
Petroleum benzine 60-95		LC50 (fish, 96 h) < 10 mg/L EC50 (aquatic invertebrates, 48h) < 10 mg/l EC50 (algae, 72 h) < 10 mg/L

12.2. Persistence and degradability
There are no data available on the preparation/mixture itself. The single components are biodegradable. Product is easily volatile.

12.3. Bioaccumulative potential
There are no data available on the mixture itself. Log KOW : 2.96-4.5 (based on the components)

12.4. Mobility in soil
There are no data available on the mixture itself.

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. (based on the components)

12.6 Endocrine disruptive effect
The substance/mixture contains no components ≥ 0.1% classified as endocrine disruptors under REACH Art. 57(f), or Reg. (EU) 2017/2100 or 2018/605.

12.7. Other adverse effects
Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

SECTION 13: Disposal considerations

13.1. Waste treatment methods
Appropriate disposal/Product:
Dispose of waste according to applicable legislation. Waste disposal according to directive 2008/98/EC, covering waste and dangerous waste. Must not be disposed together with household garbage.

Appropriate disposal / Package
Non-contaminated packages may be recycled. Handle contaminated packages in the same way as the substance itself.

List of proposed waste codes / waste designations according to EWC / AVV
The allocation of waste identity numbers/waste descriptions must be carried out according to the EEC, specific to the industry and process.

SECTION 14: Transport information

14.1. UN number
UN No.: 1206

14.2. UN proper shipping name
Land transport (ADR/RID)
HEPTANE
Spezialbenzin 60/95; n-Heptan

Sea transport (IMDG), Air transport (ICAO-TI / IATA-DGR)
HEPTANES
Petroleum benzine 60-95; n-Heptane

14.3. Transport hazard class(es)

Hazard label(s) / Label: 3 **Classification code: / Classification Code:** F1

14.4. Packing group

Packing group/ Packing Group: II

14.5. Environmental hazards

	Yes	No
ADR/RID / IMDG / ICAO-TI / IATA-DGR:	X	
Marine pollutant:	X	

14.6. Special precautions for user

Land transport (ADR/RID)

transport category: 2 **tunnel restriction code:** D/E
Special provisions: **Limited quantity (LQ):** 1 L

Sea transport (IMDG)

EmS-No: F-E, S-D
Special provisions: - **Limited quantity (LQ):** 1 L

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

Remark No bulk transport by sea is intended.

SECTION 15: Regulatory information

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

EU legislation

Information on Regulation (EC) No 166/2006 establishing a European Pollutant Release and Transfer Register:
Substance / mixture / product / ingredients not listed

Regulation (EC) No. 1005/2009 on substances that lead to the depletion of the ozone layer:
not applicable , Substance / mixture / product / ingredients not listed

Regulation (EC) No. 648/2004 (Detergents regulation)
not applicable

Regulation (EC) No 850/2004 [POP-Regulation]:
REGULATION (EU) 2019/102: Substance / mixture / product / ingredients not listed

Regulation (EU) No 649/2012 on the export and import of dangerous chemicals:
Substance / mixture / product / ingredients not listed

Use restriction according to REACH annex XVII, no.::
none

National regulations
Observe in addition any national regulations!

Restrictions of occupation
Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Other regulations, restrictions and prohibition regulations
CA Proposition 65 : Substance(s) not listed. RoHS Directive 2011/65/EU : not relevant

15.2. Chemical Safety Assessment

For this preparation a chemical safety assessment has been carried out. -
For this substance a chemical safety assessment has not been carried out.

SECTION 16: Other information

Relevant H- and EUH-phrases (Number and full text):
Hazard statements

H225	Highly flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H336	May cause drowsiness or dizziness.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.

Training advice
Observe instructions for use.

Recommended restrictions of use:
refer to chapter 1.

Further remarks:
The information provided in this Safety Data Sheet is based on our current knowledge at the time of publication. It is intended to offer guidance for the safe handling of the product mentioned herein during storage, processing, transport, and disposal. These details are not transferable to other products. If the product is blended, mixed, or processed with other materials, or subjected to any treatment, the information in this Safety Data Sheet may not apply to the resulting new material, unless explicitly stated otherwise.

Documentation of changes:
-

Key literature references and sources for data
Data arise from reference works and literature.

Abbreviations and acronyms

AC: Article category
ACGIH: American Conference of Governmental Industrial Hygienists
ADN: European agreement concerning the international carriage of dangerous goods by inland waterways (Accord européen relatif au transport international des marchandises dangereuses par voies de navigation intérieures)
ADR: European agreement concerning the international carriage of dangerous goods by road (Accord européen relatif au transport international des marchandises dangereuses par route)
AGW: Occupational exposure limit
AOX: Adsorbable organically bound halogens
Bw/KG: Body weight
CAS: Chemical Abstracts Service
CMR: Substances classified as carcinogenic, mutagenic or toxic for reproduction
CSR: Chemical safety report
DIN: German Institute for Standardization (Deutsches Institut für Normung)
DNEL: Derived no-effect level
DPD: Dangerous Preparations Directive (Richtlinie 1999/45/EC)
DSD: Dangerous Substances Directive (Richtlinie 67/548/EWG)
DU: Downstream user
EC50: Effective concentration 50%
ECHA: European Chemicals Agency
EN: European standard
EWC/EWL: European Waste Catalogue
GHS: Globally harmonized system of classification and labelling of chemicals
IATA: International Air Transport Association
IBC: Intermediate bulk container
ICAO: International Civil Aviation Organization
IMDG Code: International Maritime Dangerous Goods Code
IMO: International Maritime Organization
ISO: International Organization for Standardization
LC50: Lethal concentration 50%
LD50: Lethal dose 50%
LEV: Local exhaust ventilation
LOAEL: Lowest observed adverse effect level
LOEL: Lowest observed effect level
MAK: Maximum workplace concentration (Maximale Arbeitsplatzkonzentration – DFG)
n.a.: Not applicable
n.b.: Not determined
NOAEC: No observed adverse effect concentration
NOAEL: No observed adverse effect level
NOEC: No observed effect concentration
OEL: Occupational exposure limit
PBT: Persistent, bioaccumulative and toxic
PNEC: Predicted no-effect concentration
POP: Persistent organic pollutant
PPE/PSA: Personal protective equipment
REACH: Registration, Evaluation, Authorisation and Restriction of Chemicals
RID: Regulations concerning the international carriage of dangerous goods by rail (Règlement international concernant le transport des marchandises dangereuses par chemin de fer)
STEL: Short-term exposure limit
SVHC: Substance of very high concern
TLV: Threshold limit value
UN: United Nations
VOC: Volatile organic compounds
vPvB: Very persistent and very bioaccumulative
dw: Dry weight