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

Product identifier
Trade name: UV-Fluorescence (water washable)
Article number: UVF - 4
Relevant identified uses of the substance or mixture and uses advised against
Application of the substance / the preparation
At the penetration process by colours acc. to EN ISO 3452-1
[EN 571-1] (DIN 54 152 part 1) for finding surface cracks.

Details of the supplier of the safety data sheet
Manufacturer/Supplier
Helmut Klumpf
Technische Chemie KG
Industriestr. 15
D - 45699 Herten Phone.: +49(0)2366 1003 - 0 Email: klumpf@diffu-therm.de

Emergency telephone number: a.m. or next Emergency phone:

2. Hazards identification

Classification of the substance or mixture
GHS02 Flammable Aerosol, Category 1
GHS07 Exclamation mark
STOT SE. 3 H336 May cause drowsiness or dizziness.

Labelling according to Regulation (EC) No 1272/2008
The substance is classified and labeled according to the CLP regulation.

Hazard pictograms GHS02, GHS07

Signal word Danger

Hazard statements
H222 Extremely flammable aerosol.
H229 Pressurised container: May burst if heated.
H336 May cause drowsiness or dizziness.
EUH066 Repeated exposure may cause skin dryness or cracking.
H412 Harmful to aquatic life with long lasting effects.

Precautionary statements
P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
P211 Do not spray on an open flame or other ignition source.
P251 Do not pierce or burn, even after use.
P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122°F.
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.
P304+P340 IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312 Call a POISON CENTER or doctor/physician if you feel unwell.

Results of PBT and PvB assessment
PBT: Not applicable
vPvB: Not applicable

3. Composition/information on ingredients

Chemical characterization:
Mixture of substances listed below and non-hazardous additions.

Components:	Name of chemical	weight %
EG-Nr.: 918-481-9	hydrocarbons, C10-C13, n-Alkane, Isoalkane, Cyclene, < 2% aliphatic GHS08 Asp. Tox. 1, H304	< 30
EG-Nr.: 918-811-1	hydrocarbons, C10, aliphatic, <1% Naphthalin GHS08 Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336	< 10
CAS: 106-97-8 EINECS: 203-448-7	n-butane GHS02 Flam. Gas 1, H220; GHS04	< 20
CAS: 74-98-6 EINECS: 200-827-9	propane GHS02 Flam. Gas 1, H220; GHS04	< 20

CAS: 64742-94-5 EINECS: 265-198-5	aromatic hydrocarbons GHS08, H302, EUH066, H304, H336, H412	< 10
CAS: 564742-47-8 EINECS: 265-149-8	aliphatic hydrocarbons GHS08, H302, EUH066, H304, H336	< 15
CAS: 196823-11-7 EINECS: listed	oxirane, methyl-, polymer with oxirane, mono isotridecyl ether, block GHS07 Eye Dam./Irrit. 2, H319 signal word: Attention	< 10

4. First aid measures

General information:
Remove contaminated soaked clothing immediately.

After inhalation:
In the event of symptoms refer for medical treatment.

After skin contact:
In case of contact with skin wash off with soap and water.

After eye contact:
In case of contact with eyes rinse thoroughly with plenty
of water and seek medical advice.

After swallowing
Rinse out mouth and give plenty of water to drink.
Do not induce vomiting; instantly call for medical help. Instantly call for doctor

5. Fire fighting measures

Extinguishing media

Suitable extinguishing agents
CO2, extinguishing powder or water jet. Fight larger fires with water jet or alcohol-resistant foam.

For safety reasons unsuitable extinguishing agents Water with a full water jet.

Special hazards arising from the substance or mixture
Hazardous Combustion Products: Smoke, Fume, Incomplete combustion products, Oxides of carbon.

Advice for firefighters
Use water spray to cool fire exposed surfaces and to protect.
Runoff from fire control materials or dilution from entering into waters, sewers or drinking water supply.
Firefighters must use a standard protective equipment, including helmets with face protection and self-contained
breathing protection equipment (SCBA).

Protective equipment: Put on breathing apparatus.

Additional information:
Cool containers at risk with water spray jet.
Danger for bursting of aerosols when heated for more than 50°C.
Aerosols that burst in fire can be mightily shot away.

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures
Wear protective equipment. Keep unprotected persons away.
Ensure adequate ventilation
Keep away from ignition sources
Bring persons out of danger.

Environmental precautions:
Do not allow product to reach sewage system or water bodies.
Prevent material from reaching sewage system, holes and cellars.
Inform respective authorities in case product reaches water or sewage system.
Dilute with much water. Prevent from spreading (e.g. by damming-in or oil barriers).

Methods and material for containment and cleaning up:
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Ensure adequate ventilation.

7. Handling and storage

Handling:

Advice on safe handling:
Provide good room ventilation even at ground level (vapours are heavier than air).

Advice on protection against fire and explosion:
Keep away from sources of ignition.

Do not smoke.
Take precautionary measures against static discharges.

Storage:

Requirements for storage rooms and vessels:
Filled aerosols must not be exposed to:

1. Heating of more than 50°C by sun beams or other heat sources.
2. Storage in gates, passages, wells of staircases, buildings, floors, and lofts.

Keep container in a well-ventilated place.

Advice on storage compatibility:
Do not store together with oxidizing agents.

Further information on storage conditions:
Keep container in a well-ventilated place.

Classification acc. to prescription:
Aerosols (Aerosol containers) (TRG 300)
Ordinance on Industrial Safety and Health
TRGS 510.

Storage class: 2B

8. Exposure controls and personal protection

Additional advice on system design:
No further data, see item 7.

Control parameters

Components with critical values that require monitoring at the workplace:	
RCP group C11-C13 aromatics **(< 40%)**	
TRGS 900	Long-term value: 100 mg/m^3
106-97-8 butane (20%)	
WEL	2.400 mg/m^3, 1.000 ml/m^3; 4(II); DFG
74-98-6 propane (20%)	
WEL	1.800 mg/m^3, 1.000 ml/m^3; 4(II); DFG

Personal protection equipment:

General protective and hygienic measures
The usual precautionary measures should be adhered to in handling the chemicals. Keep away from foodstuffs, beverages and food. Instantly remove any soiled and impregnated garments. Wash hands during breaks and at the end for the work. Avoid contact with eyes and skin.

Breathing equipment:
If engineering controls do not maintain airborne contaminant concentrations at a level which is adequate to protect worker health, an approved respirator may be appropriate. Respirator selection, use, and maintenance must be in accordance with regulatory requirements, if applicable.
In case of brief exposure or low pollution use breathing filter apparatus. In case of intensive or longer exposure use breathing apparatus that is independent of circulating air.
Half-face filter respirator Type A.

Hand protection:
Neoprene gloves

Eye protection:
Tightly fitting goggles

Skin Protection:
Light protective clothing.

General protective measures:
Avoid contact with eyes. Do not inhale aerosols.

9. Physical and chemical properties

General Information:

Form: Aerosol Colour: yellow/green Smell: almost odourless

Data relevant for safety:		(Product without power gas)	
Boiling range:		203 - 263	°C
Flash point:		75	°C
Ignition temperature:		> 200	°C
Explosive properties:	The Product is not explosive, but may form flammable/explosive vapour-air mixture.		
Explosion limits	Lower e.l.:	0,6	Vol.%
	Upper e.l.:	7	Vol.%
Vapour pressure (20°C):		30	mbar
Density (20°C):		0,87	g/cm³
Solubility in water (20°C):		emulsifiable	
Viscosity (20°C):		6,35	mm²/s

10. Stability and reactivity

Thermal decomposition / conditions to be avoided:
No decomposition if used according to specifications.

Materials to be avoided:
Reacts with strong oxidizing agents.

Dangerous reactions:
No dangerous reactions known.

11. Toxicological information

The classification of risk is based on knowledge of the toxicity of the components contained in this product.
Acute toxicity: Based on available data, the classification criteria are not met.

LD/LC50 values that are relevant for classification:			
Hydrocarbons, C10-C13, n-alkanes, isoalkanes, cyclics, < 2% aromatics			
Oral	LD50		> 5.000 mg/kg (rad)
Dermal	LD50		> 5.000 mg/kg (rab)
Inhalative	LC50		> 4.951 mg/l (rat)
Hydrocarbons, C10, aromatics, < 1% naphthalene			
Oral	LD50		> 5.000 mg/kg rat) (Test(s) equivalent / similar OECD-Directives 401)
Dermal	LD50		> 2.000 mg/kg (rab) (Test(s) equivalent / similar OECD-Directives 402)
Inhalative	LC50		> 4.688 mg/l (rat) (Test(s) equivalent / similar OECD-Directives 403)

Primary irritant effect:
on the skin: Based on available data, the classification criteria are not met.
Serious eye damage / irritation: Based on available data, the classification criteria are not met.
Respiratory or skin sensitization: Based on available data, the classification criteria are not met.
CMR effects (carcinogenity, mutagenicity and toxicity for reproduction))
Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.
Specific target organ toxicity - single exposure
May cause drowsiness or dizziness.
Specific target organ toxicity - repeated exposure
Based on available data, the classification criteria are not met.
Aspiration hazard: May be fatal if swallowed and enters airways.

12. Ecological information

Data on elimination (persistence and degradability):
The product is inherently biodegradable.
Water hazard class WHC 2 = hazardous to water (self-classification)
To eliminate the obtained in the intermediate cleaning dirty water,
the flocculation precipitation or activated carbon adsorption is.
Behaviour in environment compartments: Not known.
Ecotoxicological effects:
No data are available.
Behaviour in sewage plant:
When low concentrations are discharged correctly into adapted biological sewage treatment plants, interference with the degradation activity of activated sludge is not likely.

General information's:

The behaviour of the product in sewage treatment plants has not been tested.
The information on this was derived from products of similar structure or composition.

13. Disposal considerations

Waste treatment methods
Recommendation

The product is suitable for burning in an enclosed, controlled burner suitable for fuel value or disposal by supervised incineration at very high temperatures at which it does not come to the formation of undesired inflammatory products.
Must not be disposed of together with household garbage. Do not allow product to reach sewage system.
Disposal must be made according the local authority regulations.

European waste catalogue -
Uncleaned packaging's:
Recommendation:

Empty contaminated packaging's thoroughly. They can be recycled after thorough and proper cleaning.
Packaging's that cannot be cleaned are to be disposed of in the same manner as the product.

14. Transport information

Land transport

UN-No.: 1950 Identification: DRUCKGASPACKUNGEN flammable
Class: 2 Package Group: -- Tunnel restriction code: D
Classifications code: 5 F shipment category: 2
Labelling of the Package: UN 1950 AEROSOLE Label-no.: 2.1
Packing instruction: P 003, MP 9 Limited Quantities Only: 1L (Package ≤ 30 kg)

Marine transport IMDG/GGVSee

UN-No.: 1950 Class: 2.1 Package Group: --
EMS-No.: F-D, S-U Label-no.: -- Marine Pollutant: -- Label: --
Proper Shipping Name: Aerosols (Limited Quantities Only) (Package ≤ 30 kg)

Air transport ICAO-TI and IATA-DGR

Class/Division: 2.1 UN/ID-No.: 1950
Package Group: --, Label: 2.1
Packing inst. Passenger aircraft: 203/Y203 Max. net/Package: 75 kg/30 kg
Packing inst. Cargo aircraft: 203 Max. net/Package: 150 kg
Proper Shipping Name: Aerosols, flammable

15. Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture
Labelling according to Regulation (EC) No 1272/2008

The substance is classified and labelled according to the CLP regulation.

Relevant phrases

H220	Extremely flammable gas.
H222	Extremely flammable aerosol.
H229	Pressurised container: May burst if heated.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
EUH066	Repeated exposure may cause skin dryness or cracking.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

National regulations
Water hazard class: Water hazard class 2 (Assessment by list): hazardous for water.
Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

16. Other information

These date are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally contractual relationship.

Department issuing data specification sheet:

Contact: Helmut. Klumpf Technische Chemie KG

Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
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
EINECS: European Inventory of Existing Commercial Chemical Substances
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent