SECTION 1: SUBSTANCE/MIXTURE IDENTIFICATION AND MANUFACTURER/SUPPLIER IDENTIFICATION

1.1. Product identification
ADHESIVE CONTACT UNIWERSAL ADHESIVE IN SPRAY
UFI: TCN0-W0HX-N00N-K3UT

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

Area of use:
SU3 Industrial manufacturing: Uses of substances as such or in preparations at industrial sites.
SU22 Professional uses: Public domain (administration, education, entertainment, services, craftsmen).
SU21 Consumer uses: Private households / general public / consumers.

Product category:
PC1 Adhesives and sealants.

Process category:
PROC7 Industrial spraying.
PROC11 Non industrial spraying.

Use of the substance/mixture:
Adhesive.

1.3 Data of the safety data sheet supplier

Przedsiębiorstwo RANAL Sp. z o.o.
Ul. Łódzka 3
42-240 Rudniki k. Częstochowy, PL

Tel.: +48 34 329 45 03
Fax: +48 34 320 12 16
Registration number 000029202

Person responsible for the safety data sheet: ranal@ranal.pl

1.4. Emergency telephone
+48 34 329 45 03 (8.00 - 15.00)

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

Classification according to the regulation (EC) no 1272/2008.

GHS02 flame
Aerosol 1 H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.

GHS09 environment
Aquatic Chronic 2 H411 Toxic to aquatic life with long-lasting effects.

GHS07
Skin Irrit. 2 H315 Causes skin irritation.
STOT SE 3 H336 May cause drowsiness or dizziness.
Asp. Tox. 1 H304 May be fatal if swallowed and enters airways.

2.2. Label elements
The product has been classified and labelled according to CLP regulation.

Hazard pictograms:

GHS02 GHS07 GHS09
Signal word: **Danger.**

Components indicating hazard for labelling:
Naphtha (petroleum), hydrotreated light.
Butan-2-one.

Hazard statement:
H222-H229 Extremely flammable aerosol. Pressurized container: May burst if heated.
H315 Causes skin irritation.
H336 May cause drowsiness or dizziness.
H411 Toxic to aquatic life with long-lasting effects.

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.
P211	Do not spray on an open flame or other ignition source.
P251	Pressurized container – Do not pierce or burn, even after use.
P260	Do not breathe spray.
P271	Use only outdoors or in a well-ventilated area.
P273	Avoid release to the environment.
P280	Wear protective gloves/eye protection.
P302+P352	IF ON SKIN: Wash skin with plenty of water and soap.
P304+P340	IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P312*	Call a POISON CENTER/doctor if you feel unwell.
P403	Store in a well-ventilated place.
P410+P412	Protect from sunlight. Do not expose to temperatures exceeding 50°C/122°F.
P501	Dispose of contents/container in accordance with local / regional / national / international regulations.

2.3. Other hazards

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

Endocrine disrupting properties:
78-93-3 butan-2-one: List II

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.1. Substances
Not applicable.

3.2. Mixtures
Description: Mixture of biocatalysts with liquid propellant.

Substance name
Concentration [% weight]
Identification numbers
Classification and labelling

Naphtha (petroleum), hydrotreated light;
25-< 50%
CAS: 64742-49-0
EC number: 265-151-9*
Reg. no: 01-2119475133-43*
Flam. Liq. 2, H225, Asp. Tox. 1, H304, Aquatic Chronic 2, H411, Skin Irrit. 2, H315, STOT SE 3, H336.

Dimethyl ether
10-< 25%
CAS: 115-10-6
EINECS: 204-065-8
Reg. no.: 01-2119472128-37
Flam. Gas 1A, H220; Press. Gas (Liq.), H280

Butane (1,3 Butadiene <0,1%)
2.5-< 10%
CAS: 106-97-8
EINECS: 203-448-7
Reg. no.: 01-2119474691-32
Flam. Gas 1, H220; Press. Gas (Comp.), H280.

Propane
2.5-< 10%
CAS: 74-98-6
EINECS: 200-827-9
Reg. no.: 01-2119486944-21
Flam. Gas 1A, H220; Press. Gas (Comp.), H280.

Butan-2-one
2.5-< 10%
CAS: 78-93-3
EINECS: 201-159-0
Reg. no.: 01-2119457290-43
Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336, EUH066

Isobutane
0.1-< 1%
CAS: 75-28-5
EINECS: 200-857-2

Reg. no: 01-2119485395-27
Flam. Gas 1A, H220, Press. Gas (Comp.), H280.

Full text of hazard statements provided in section 16 of the Sheet.

SECTION 4: FIRST AID MEASURES

4.1. Description of first aid measures
General information: See section 11 of the Material Safety Data Sheet.

After inhalation: In case of loss of consciousness place and transport in stable recovery position.
After contact with skin: Immediately wash with water and soap and rinse thoroughly.
After contact with eyes: Rinse opened eye for several minutes under running water.
After swallowing: Do not induce vomiting and call a doctor.

4.2. Most important symptoms both acute and delayed
No further relevant data available.

4.3. Indications of any immediate medical attention and special treatment needed
No further relevant data available.

SECTION 5: FIREFIGHTING MEASURES

5.1. Extinguishing media
Suitable extinguishing agents: Water mist. Extinguishing powder. Carbon dioxide. Foam resistant to alcohol.
Extinguishing media unsuitable due to safety considerations: Full jet of water.

5.2. Special hazards arising from the substance or mixture
No further relevant data available.

5.3. Advice for fire fighters
Special protective equipment: Wear respiratory protection.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency measures
Wear protective clothing. Move unprotected persons to a safe place.

6.2. Environmental precautions
Prevent from reaching sewage system or water courses.
In the event of leakage into water course or sewage system inform competent authorities.
Do not allow entering sewage system /surface water /ground water.

6.3. Methods and materials for containment and cleaning up
Ensure adequate ventilation. *

6.4. Reference to other sections
Information on safe handling: see section 7. Information on personal protective measures: see section 8. Information on disposal: see section 13.

SECTION 7: HANDLING AND STORAGE OF SUBSTANCES AND MIXTURES

7.1. Precautions for safe handling
Ensure good ventilation / exhaustion at the workplace.

Information about fire and explosion protection:
Do not spray towards flames or over glowing material. Keep ignition sources away - do not smoke. Take precautionary measures against static discharges. Warning: Pressurized container. Protect from sunlight and temperatures above 50°C. Do not open violently and do not burn even after use.

7.2. Conditions for safe storage, including any incompatibilities

Storage:
Requirements to be met by storerooms and receptacles:
Keep cool. Observe regulations concerning the storage of pressurized gas tanks.
Information about common storage: Observe regulations concerning the storage of pressurized gas tanks.
Further information about storage conditions: Store in well-sealed barrels in a cool and dry place. Protect against heat and direct sunlight.

7.3. Special end use (s)
No further relevant data available.

SECTION 8: EXPOSURE CONTROL/PERSONAL PROTECTION MEASURES

8.1. Control parameters

Components with limit values that require monitoring depending on the workplace:

115-10-6	dimethyl ether	- MPC: 1000 mg/m^3
106-97-8	butane (1,3 Butadiene <0,1%)	MPIC: 3000 mg/m^3 MPC: 1900 mg/m^3
74-98-6	propane	- MPC: 1800 mg/m^3
78-93-3	butan-2-one	MPIC: 900 mg/m^3 MPC: 450 mg/m^3 skin
75-28-5	isobutane	TLV MPC: 1900 mg/m^3, 800 ppm
		Additional information in section 3 of this sheet.

DNEL values:

64742- 49 -0 Naphtha (petroleum), hydrotreated light*

Inhalation	DNEL Acute-systemic	1152 mg/m^3 (Consumer)
		1286.4 mg/m^3 (Worker)
	DNEL Acute-local	640 mg/m^3 (Consumer)
		1066.67 mg/m^3 (Worker)
	DNEL Long-term - local	178.57 mg/m^3 (Consumer)
		837.5 mg/m^3 (Worker)

78-93-3 butan-2-one

Oral	DNEL Long term-systemic	31 mg/kg bw/day (Consumer)
Skin	DNEL Long term-systemic	412 mg/kg bw/day (Consumer)
		1161 mg/kg bw/day (Worker)
Inhalation	DNEL Long term-systemic	106 mg/m^3 (Consumer)
		600 mg/m^3 (Worker)

Additional information: The currently valid lists were used as basis.

8.2. Exposure control

Technical control measures: No further data, see section 7.

Personal protective measures:

General measures of protection and hygiene:
Keep away from foodstuffs, beverages and feed. Immediately take off all soaked and contaminated clothing. Wash hands before each break and at the end of work. Do not breathe gases/ vapours / spray. Avoid contact with skin. Avoid contact with eyes and skin. General ventilation.

Respiratory protection:
In case of insufficient ventilation use respiratory protection.
Filter A2/P2.

Hands protection:
Use protective gloves to work with chemicals according to standard EN 374.


Protective gloves.
Gloves resistant to solvents.
Selection of the glove material on consideration of the breakthrough times, rates of diffusion and degradation.

Penetration time of the glove material:
The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a mixture consisting of several substances the resistance of the materials from which the gloves are made cannot be calculated in advance and should therefore be checked before use.
Nitrile rubber.
Recommended thickness of the material: ≥0.5 mm

Penetration time of the glove material::
For continuous contact, it is recommended to use gloves with a tensile strength of not less than 240 minutes, with a penetration time of more than 480 minutes as priority. We recommend the same for short-term works or protection against splash. We understand that gloves that offer this level of protection may not be in stock. In this case, a shorter breakthrough time is acceptable, while maintaining the maintenance procedures and temporarily replacing the gloves. The thickness of the glove is not a good measure of the glove's resistance to chemicals as it depends on the exact composition of the glove material.
Information about the penetration time of the substance should be obtained from the glove manufacturer and has to be observed.

Eye or face protection:


Protective glasses (EN-166).
Tightly sealed protective glasses.

Body protection:
Use protective clothing (EN-13034/6).
It is recommended to use antistatic, chemical and oil-resistant clothing as well as safety shoes (EN1149; EN340 & EN ISO 13688; 13034-6).

Environmental control:
Use an appropriate container to prevent environmental contamination.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1. Information on basic physical and chemical properties*

General information:	
Physical state:	Aerosol
Colour:	according to product name.
Odour:	characteristic
Odour threshold:	Not specified.
Change of state:	
Melting /freezing point:	Not specified.
Initial boiling point and boiling range:	-44.5°C
Flammability of materials*:	Not applicable.
Explosion limits:	
Bottom:	1.1 Vol %
Top:	18.6 Vol %
Flash point:	-97°C
Auto ignition point:	>200°C *
pH:	The mixture is non-polar / aprotic
Viscosity:	
Dynamic:	Not specified.
Kinetic:	≤20.5 mm^2/s, 40°C (L)
Solubility in/miscibility with:	
Water:	Not miscible or difficult to mix.
n-octanol/water partition coefficient (log value*):	Not specified.
Vapour pressure at 20 °C:	3000 hPa
Vapour pressure at 50 °C*:	5500 hPa
Density or relative density:	
Density at 20°C:	0.707 g/cm^3
Relative density:	Not specified.
Vapour density:	Not specified.

9.2. Other information*

Form*:	Aerosol

Important information on health and environment protection and safety*:

Ignition temperature:	The product is not self-igniting*
Explosive properties:	The product is not explosive, but may form explosive mixtures with the air
Organic solvents:	83.1%.
Solids content:	16.8%.
Evaporation rate:	Not applicable.

Information on the physical hazard classes:

Explosives:	none
Flammable gases:	none
Aerosols:	Extremely flammable aerosol. Pressurized container. May burst if heated.
Oxidizing gases:	none
Gases under pressure	none
Flammable liquids:	none
Flammable solids:	none
Self-reactive substances and mixtures:	none
Pyrophoric liquids:	none
Pyrophoric solids:	none
Self-heating substances and mixtures:	none
Substances and mixtures which emit flammable gases in contact with water: none	
Oxidizing liquids:	none
Oxidising solids:	none
Organic peroxides:	none

Substances corrosive to metals:	none
Desensitised explosives:	none

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity
No further relevant data available.

10.2. Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used as intended.

10.3. Possibility of hazardous reactions
Hazardous reactions unknown.

10.4. Conditions to be avoided
No further relevant data available.

10.5. Incompatible materials
No further relevant data available.

10.6. Hazardous decomposition products
Hazardous decomposition products unknown.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1. Information on the hazard classes defined in Regulation (EC) No 1272/2008*

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

Relevant classified LD/LC50 values:

64742- 49 -0 Naphtha (petroleum), hydrotreated light

Oral	LD50	> 5000 mg/kg (rat)
Dermal	LD50	> 2000 mg/kg * (rabbit)
Inhalation	LC50	> 5610 mg/m^3 * (rat)

78-93-3 butan-2-one

Oral	LD50	> 2193 mg/kg (rat)
Dermal	LD50	> 5000 mg/kg (rabbit)
		5000 mg/kg (rabbit)

Skin corrosion/irritation: Causes skin irritation.
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.
Allergic effect on airways or skin: Based on available data, the classification criteria are not met.
Mutagenic effect on germ cells: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Harmful effect on reproduction: 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.

11.2. Information on other hazards*
Endocrine disrupting properties:
78-93-3 butan-2-one: List II

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

Aquatic toxicity*:
78-93-3 butan-2-one

LC50 / 96 h	2993 mg/l	(*Pimephales promelas*)
EC50 / 48 h	308 mg/l	(*Daphnia magna*)

12.2. Persistence and degradability
Not easily biodegradable.

12.3. Bioaccumulative potential
No further relevant data available.

12.4. Mobility in soil
No further relevant data available.

12.5. Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

12.6. Endocrine disrupting properties*
See section 11 for information on endocrine disrupting properties.

12.7. Other hazardous effects*

Other hazardous effects:
Warning: Poisonous to fish.

Further ecological information (general information):
Water hazard class 3 (strong Self-assessment): very hazardous to water. *
Do not allow the product to reach ground water, surface water or sewage system.
Dangerous to drinking water if even small quantities leak into the ground.
Poisonous to fish and plankton in water reservoirs.
Poisonous to aquatic life.

SECTION 13: DISPOSAL CONSIDERATIONS

13.1. Waste treatment methods

Recommendation: Must not be disposed together with household garbage. Prevent from reaching sewage system.

Contaminated packaging: Recommendation: Dispose of according to applicable regulations.

European waste catalogue:

20 01 13	Solvents
15 01 04	Metallic packaging
HP3	Flammable
HP4	Irritating - causing skin irritation and eye damage.
HP5	Specific Target Organ Toxicity (STOT) or aspiration hazard
HP14	Ecotoxic.

SECTION 14: TRANSPORT INFORMATION

14.1. UN number or ID number*
ADR, ADN, IMDG, IATA — UN1950

14.2. UN proper shipping name

ADR, ADN	UN1950 AEROSOLS, ENVIRONMENTALY HAZARDOUS
IMDG	AEROSOLS, MARINE POLLUTANT *
IATA	AEROSOLS, flammable

14.3. Transport hazard class (-es)

ADR

Class	2 5F gases
Label	2.1

ADN
Class ADN/R: 2 5F

IMDG

Class 2.1 **gases**
Label 2.1

IATA

Class 2.1 **gases**
Label 2.1

14.4. Packaging group
ADR, IMDG, IATA none

14.5. Environmental hazards

The product contains substances hazardous to the environment: Naphtha (petroleum), hydrotreated light *

Marine pollutants: Yes.
Symbol (fish and tree).

Special labelling (ADR):
Symbol (fish and tree).

14.6. Special precautions for users

Warning:	gases
Hazard identification number (Kemler code): -	
EMS Number:	F-D,S-U
Stowage Code	SW1 Protected from sources of heat. SW2 Clear of living quarters.
Segregation Code	SG69 For AEROSOLS with a maximum capacity of 1 litre: Segregation as for class 9. Stow "separated from" class 1 except for division 1.4. For AEROSOLS with a capacity above 1 litre: Segregation as for the appropriate subdivision of class 2. For WASTE AEROSOLS: Segregation as for the appropriate subdivision of class 2.

14.7. Sea transport in bulk in accordance with IMO instruments*
Not applicable.

Transport/ further information:
ADR

Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
Tunnel restriction code	D

IMDG

Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
UN "Model Regulation":	UN 1950 AEROSOLS, 2.1, ENVIRONMENTALY HAZARDOUS

SECTION 15: REGULATORY INFORMATION

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

Directive 2012/18/EU:
Dangerous components- ANNEX I: None of the components is listed.

Seveso category:
P3a FLAMMABLE AEROSOLS
E2 Hazardous to the aquatic environment

Qualifying quantity (tonnes) for the application of lower-tier requirements: 150 t
Qualifying quantity (tonnes) for the application of upper-tier requirements: 500 t

Regulation (EC) no 1907/2006 ANNEX XVII: Restriction conditions: 3

Directive 2011/65/EU of the European Parliament and of the Council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment– ANNEX II: None of the components are listed.

Regulation (EU) 2019/1148:
Annex II - Explosives precursors subject to restrictions (Upper Limit Value for the purposes of issuing permits pursuant to art. 5 sec. 3): None of the components are listed.
Annex II - Explosives precursors subject to notification: None of the components are listed.
Regulation (EC) No 273/2004 on drug precursors: 78-93-3 butan-2-one: 3 *
Regulation (EC) 111/2005 laying down rules for the monitoring of trade between the Community and third countries in drug precursors: 78-93-3 butan-2-one: 3 *

National regulations:
Employment Limitation Tips:
Class NK
Share in % 75-<100

VOC-CH 83,20 %
VOC-EU 588,2 g/l *
Danish MAL Code 5-3

15.2. Chemical safety assessment
Chemical safety assessment has not been performed.

SECTION 16: OTHER INFORMATION
This information is based on our present knowledge; however it does not definitively define the production characteristics and cannot be used as a justification for valid contracts.

Full text of hazard statements mentioned in section 2 - 15 of the Sheet:

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H280	Contains gas under pressure: may explode if heated.
H304	May be fatal if swallowed and enters airways.
H315	Causes skin irritation.
H319	Causes eye irritation.
H336	May cause drowsiness or dizziness.
H411	Toxic to aquatic life with long-lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Classification according to the regulation (EC) no 1272/2008.
PHYSICAL AND CHEMICAL PROPERTIES: The classification is based on the results of the mixtures tested.
Health hazard. Environmental hazards: method of classification of mixtures on the basis of mixture components (sum formula).

Explanation of abbreviations and acronyms used in the MSDS:

ADR	Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road).
IMDG	International Maritime Code for Dangerous Goods.
IATA	International Air Transport Association.
GHS	Globally Harmonised System of Classification and Labelling of Chemicals.
EINECS	European Inventory of Existing Commercial Chemical Substances.
ELINCS	European List of Notified Chemical Substances.
CAS	Chemical Abstracts Service (division of the American Chemical Society).
MAL-Code	Måleteknisk Arbejdshygiejnisk Luftbehov (Regulation for the labeling concerning inhalation hazards, Denmark).
DNEL	Derived No-Effect Level (REACH).
LC50	Lethal concentration, 50 percent.
LD50	Lethal dose, 50 percent.
PBT	Persistent, Bioaccumulative and Toxic.
vPvB	very Persistent and very Bioaccumulative.
Flam. Gas 1	Flammable gases – Category 1.
Aerosol 1	Aerosols – Category 1.
Press. Gas (Comp.)	Gases under pressure - Compressed gas.
Press. Gas (Liq.)	Gases under pressure - Liquefied gas.
Flam. Liq. 2	Flammable liquids – Category 2.

Skin Irrit. 2 Skin corrosion/irritation – Category 2.
Eye Irrit. 2 Serious eye damage/eye irritation – Category 2.
STOT SE 3 Specific target organ toxicity (single exposure) – Category 3.

Asp. Tox. 1	Aspiration hazard, Category 1.
Aquatic Chronic 2	Hazardous to the aquatic environment - long-term hazard to the aquatic environment – Category 2.

Changes in the sheet marked with the * symbol:
Update of sections:
9: rewording of sub-section 9.1: Information on basic physical and chemical properties
11: rewording of sub-section 11.1: Information on the hazard classes defined in Regulation (EC) No 1272/ 2008: added subsection 11.2. Information on other hazards
12: new subsection 12.6: Endocrine disrupting properties.
14: rewording of sub-section 14.1: UN number or ID number; rewording of sub-section 14.7: Sea transport in bulk in accordance with IMO instruments.
Changes in the content of sections: 2.2, 3.2, 6.3, 8.1, 9.1, 9.2, 11.1, 11.2, 12.1, 12.6, 12.7, 14.1, 14.5, 14.6, 14.7, 15.1, 16.
General update.

Sheet number: 06-1N6L-0123-V4