Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.08.2022 Version number 25 Revision: 22.08.2022

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

1.1 Product identifier

Trade name: Release Agent Mikon® F-57 Spray

UFI: HU80-90UY-N003-YY80

1.2 Relevant identified uses of the substance or mixture and uses advised against
No further relevant information available.
Application of the substance / the mixture Release Agent

1.3 Details of the supplier of the safety data sheet
Manufacturer/Supplier:
Muench Chemie International GmbH
Viernheimer Straße 70 - 76
D-69469 Weinheim
GERMANY
Phone: +49 (6201) 99 83 - 0
Fax: +49 (6201) 1 71 95
Mail: msds@muench-chemie.com
Web: www.muench-chemie.com

Further information obtainable from: Laboratory
1.4 Emergency telephone number:
Muench Chemie International GmbH: +49 (6201) 99 83 - 0 (7:30am-4:00pm) or +49 (171) 37 37 502 (24h)

SECTION 2: Hazards identification

2.1 Classification of the substance or mixture
Classification according to Regulation (EC) No 1272/2008

Aerosol 1	H222-H229	Extremely flammable aerosol. Pressurised container: May burst if heated.
Skin Irrit. 2	H315	Causes skin irritation.
Eye Irrit. 2	H319	Causes serious eye irritation.
STOT RE 2	H373	May cause damage to organs through prolonged or repeated exposure.
Asp. Tox. 1	H304	May be fatal if swallowed and enters airways.
Aquatic Chronic 2	H411	Toxic to aquatic life with long lasting effects.

2.2 Label elements
Labelling according to Regulation (EC) No 1272/2008
The product is classified and labelled according to the CLP regulation.
Hazard pictograms

GHS02 GHS07 GHS08 GHS09

Signal word Danger

Hazard-determining components of labelling:
Naphtha (petroleum), hydrotreated light, < 0,1 % Benzene
xylene
Solvent naphtha (petroleum), light arom., < 0,1 % Benzene
Naphtha (petroleum), hydrotreated heavy <0,1% Benzene
Hazard statements
H222-H229 Extremely flammable aerosol. Pressurised container: May burst if heated.
H315 Causes skin irritation.
H319 Causes serious eye irritation.
H373 May cause damage to organs through prolonged or repeated exposure.
H304 May be fatal if swallowed and enters airways.
H411 Toxic 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.
P260 Do not breathe dust/fume/gas/mist/vapours/spray.

(Contd. on page 2)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.08.2022 Version number 25 Revision: 22.08.2022

Trade name: Release Agent Mikon® F-57 Spray

(Contd. of page 1)

P273 Avoid release to the environment.
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
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.
Additional information:
Product contains: Reportable explosives precursors. Making available, introduction, possession and use according to Regulation (EU) 2019/1148, Article 9.
2.3 Other hazards
Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.

SECTION 3: Composition/information on ingredients

3.2 Chemical characterisation: Mixtures
Description: Resin mixture

Dangerous components:

CAS: 74-98-6 EINECS: 200-827-9	propane Flam. Gas 1A, H220; Press. Gas (Comp.), H280	10-25%
CAS: 106-97-8 EINECS: 203-448-7	butane, pure Flam. Gas 1A, H220; Acute Tox. 3, H331; Press. Gas (Comp.), H280	10-25%
CAS: 64742-49-0 EINECS: 265-151-9 Reg.nr.: 01-2119475133-43-XXXX	Naphtha (petroleum), hydrotreated light, < 0,1 % Benzene Flam. Liq. 2, H225; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Skin Irrit. 2, H315; STOT SE 3, H336	≥10-<20%
CAS: 1330-20-7 EINECS: 215-535-7	xylene Flam. Liq. 3, H226; STOT RE 2, H373; Asp. Tox. 1, H304; Acute Tox. 4, H312; Acute Tox. 4, H332; Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	10%
CAS: 64742-48-9 EINECS: 265-150-3	Naphtha (petroleum), hydrotreated heavy <0,1% Benzene Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; STOT SE 3, H336	5-10%
CAS: 64742-95-6 EINECS: 265-199-0 Reg.nr.: 01-2119455851-35-XXXX	Solvent naphtha (petroleum), light arom., < 0,1 % Benzene Flam. Liq. 3, H226; Asp. Tox. 1, H304; Aquatic Chronic 2, H411; Acute Tox. 4, H332; STOT SE 3, H335-H336	5-10%
CAS: 67-64-1 EINECS: 200-662-2	acetone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	1-5%
CAS: 78-93-3 EINECS: 201-159-0	butanone Flam. Liq. 2, H225; Eye Irrit. 2, H319; STOT SE 3, H336	1-5%

Additional information: For the wording of the listed hazard phrases refer to section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures
General information: Immediately remove any clothing soiled by the product.
After inhalation: In case of unconsciousness place patient stably in side position for transportation.
After skin contact:
If skin irritation continues, consult a doctor.
Immediately wash with water and soap and rinse thoroughly.
Immediately rinse with water.
After eye contact: Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
After swallowing: If symptoms persist consult doctor.
4.2 Most important symptoms and effects, both acute and delayed
Headache
Dizziness

(Contd. on page 3)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.08.2022 Version number 25 Revision: 22.08.2022

Trade name: Release Agent Mikon® F-57 Spray

(Contd. of page 2)

Dizziness
Nausea
Unconsciousness
4.3 Indication of any immediate medical attention and special treatment needed
If swallowed or in case of vomiting, danger of entering the lungs.

SECTION 5: Firefighting measures

5.1 Extinguishing media
Suitable extinguishing agents: CO2, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
5.2 Special hazards arising from the substance or mixture
During heating or in case of fire poisonous gases are produced.
5.3 Advice for firefighters
Protective equipment:
Wear fully protective suit.
Mount respiratory protective device.
Additional information Cool endangered receptacles with water spray.

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures
Ensure adequate ventilation
Keep away from ignition sources.
Mount respiratory protective device.
Wear protective equipment. Keep unprotected persons away.
6.2 Environmental precautions:
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
6.3 Methods and material for containment and cleaning up:
Dispose contaminated material as waste according to item 13.
Ensure adequate ventilation.
6.4 Reference to other sections
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

SECTION 7: Handling and storage

7.1 Precautions for safe handling
Keep away from heat and direct sunlight.
Ensure good ventilation/exhaustion at the workplace.
Information about fire - and explosion protection:
Do not spray onto a naked flame or any incandescent material.
Keep ignition sources away - Do not smoke.
Keep respiratory protective device available.
Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C, i.e. electric lights. Do not pierce or burn, even after use.

7.2 Conditions for safe storage, including any incompatibilities
Storage:
Requirements to be met by storerooms and receptacles:
Observe official regulations on storing packagings with pressurised containers.
Information about storage in one common storage facility: Not required.
Further information about storage conditions:
Store in dry conditions.

(Contd. on page 4)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.08.2022 Version number 25 Revision: 22.08.2022

Trade name: Release Agent Mikon® F-57 Spray

(Contd. of page 3)

Store in a cool place. Heat will increase pressure and may lead to the receptacle bursting.
Keep container tightly sealed.
Storage class: 2 B
7.3 Specific end use(s) No further relevant information available.

SECTION 8: Exposure controls/personal protection

8.1 Control parameters
Additional information about design of technical facilities: No further data; see item 7.
Ingredients with limit values that require monitoring at the workplace:

1330-20-7 xylene (10%)
IOELV Short-term value: 442 mg/m³, 100 ppm
Long-term value: 221 mg/m³, 50 ppm
Skin

67-64-1 acetone (1-5%)
IOELV Long-term value: 1210 mg/m³, 500 ppm

78-93-3 butanone (1-5%)
IOELV Short-term value: 900 mg/m³, 300 ppm
Long-term value: 600 mg/m³, 200 ppm
Additional information: The lists valid during the making were used as basis.

8.2 Exposure controls
Personal protective equipment:
General protective and hygienic measures:
Do not eat, drink, smoke or sniff while working.
Keep away from foodstuffs, beverages and feed.
Immediately remove all soiled and contaminated clothing
Wash hands before breaks and at the end of work.
Store protective clothing separately.
Avoid contact with the eyes and skin.
Respiratory protection:
Short term filter device:
Filter AX
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
Protection of hands:
Preventive skin protection by use of skin-protecting agents is recommended.


Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.
Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation
Material of gloves
Nitrile rubber, NBR
Recommended thickness of the material: ≥ 0.4 mm
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 preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.
Penetration time of glove material
The exact break trough time has to be found out by the manufacturer of the protective gloves and has to be observed.
Eye protection:


Tightly sealed goggles

(Contd. on page 5)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.08.2022 Version number 25 Revision: 22.08.2022

Trade name: Release Agent Mikon® F-57 Spray

(Contd. of page 4)

Body protection: Protective work clothing

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties
General Information
Appearance:

Form:	Aerosol
Colour:	Colourless
Odour:	Characteristic
Odour threshold:	Not determined.
pH-value:	Mixture is non-soluble (in water).
Change in condition	
Melting point/freezing point:	Undetermined.
Initial boiling point and boiling range:	80 °C
Flash point:	<0 °C
Flammability (solid, gas):	Not applicable.
Ignition temperature:	240 °C
Decomposition temperature:	Not determined.
Auto-ignition temperature:	Product is not selfigniting.
Explosive properties:	Not determined.
Explosion limits:	
Lower:	0.8 Vol %
Upper:	10.9 Vol %
Vapour pressure at 20 °C:	8,300 hPa
Density at 20 °C:	0.78 g/cm³
Relative density	Not determined.
Vapour density	Not determined.
Evaporation rate	Not applicable.
Solubility in / Miscibility with water:	Not miscible or difficult to mix.
Partition coefficient: n-octanol/water:	Not determined.
Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
Solvent content:	
Organic solvents:	97.5 %
VOC (EC)	97.50 %
9.2 Other information	No further relevant information available.

SECTION 10: Stability and reactivity

10.1 Reactivity No further relevant information available.
10.2 Chemical stability
Thermal decomposition / conditions to be avoided: No decomposition if used according to specifications.
10.3 Possibility of hazardous reactions No dangerous reactions known.
10.4 Conditions to avoid No further relevant information available.

(Contd. on page 6)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.08.2022 Version number 25 Revision: 22.08.2022

Trade name: Release Agent Mikon® F-57 Spray

(Contd. of page 5)

10.5 Incompatible materials: No further relevant information available.
10.6 Hazardous decomposition products: No dangerous decomposition products known.

SECTION 11: Toxicological information

11.1 Information on toxicological effects
Acute toxicity Based on available data, the classification criteria are not met.
LD/LC50 values relevant for classification:

106-97-8 butane, pure
Inhalative LC50/4 h 658 mg/l (Ratte)
Primary irritant effect:
Skin corrosion/irritation
Causes skin irritation.
Serious eye damage/irritation
Causes serious eye irritation.
Respiratory or skin sensitisation Based on available data, the classification criteria are not met.
Additional toxicological information:
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.
STOT-single exposure Based on available data, the classification criteria are not met.
STOT-repeated exposure
May cause damage to organs through prolonged or repeated exposure.
Aspiration hazard
May be fatal if swallowed and enters airways.

SECTION 12: Ecological information

12.1 Toxicity
Aquatic toxicity: No further relevant information available.
12.2 Persistence and degradability No further relevant information available.
12.3 Bioaccumulative potential No further relevant information available.
12.4 Mobility in soil No further relevant information available.
Ecotoxical effects:
Remark: Toxic for fish
Additional ecological information:
General notes:
Water hazard class 2 (German Regulation) (Self-assessment): hazardous for water
Do not allow product to reach ground water, water course or sewage system, even in small quantities.
Danger to drinking water if even small quantities leak into the ground.
Also poisonous for fish and plankton in water bodies.
Toxic for aquatic organisms
12.5 Results of PBT and vPvB assessment
PBT: Not applicable.
vPvB: Not applicable.
12.6 Other adverse effects No further relevant information available.

SECTION 13: Disposal considerations

13.1 Waste treatment methods
Recommendation
Must be specially treated adhering to official regulations.
Must not be disposed together with household garbage. Do not allow product to reach sewage system.

(Contd. on page 7)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.08.2022 Version number 25 Revision: 22.08.2022

Trade name: Release Agent Mikon® F-57 Spray

(Contd. of page 6)

Uncleaned packaging:
Recommendation: Disposal must be made according to official regulations.

SECTION 14: Transport information

14.1 UN-Number	
ADR, IMDG, IATA	UN1950
14.2 UN proper shipping name	
ADR	1950 AEROSOLS, ENVIRONMENTALLY HAZARDOUS
IMDG	AEROSOLS, MARINE POLLUTANT
IATA	AEROSOLS, flammable
14.3 Transport hazard class(es)	
ADR	

Class	2 5F Gases.
Label	2.1
IMDG	

Class	2.1 Gases.
Label	2.1
IATA	

Class	2.1 Gases.
Label	2.1
14.4 Packing group	
ADR, IMDG, IATA	Void
14.5 Environmental hazards:	Product contains environmentally hazardous substances: Naphtha (petroleum), hydrotreated light, < 0,1 % Benzene
Marine pollutant:	No Symbol (fish and tree)
Special marking (ADR):	Symbol (fish and tree)
14.6 Special precautions for user	Warning: Gases.
Hazard identification number (Kemler code):	-
EMS Number:	F-D,S-U
Stowage Code	SW1 Protected from sources of heat. SW22 For AEROSOLS with a maximum capacity of 1 litre: Category A. For AEROSOLS with a capacity above 1 litre: Category B. For WASTE AEROSOLS: Category C, 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 Transport in bulk according to Annex II of Marpol and the IBC Code	Not applicable.

(Contd. on page 8)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.08.2022 Version number 25 Revision: 22.08.2022

Trade name: Release Agent Mikon® F-57 Spray

(Contd. of page 7)

Transport/Additional information:

ADR	
Limited quantities (LQ)	1L
Excepted quantities (EQ)	Code: E0 Not permitted as Excepted Quantity
Transport category	2
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, ENVIRONMENTALLY HAZARDOUS

SECTION 15: Regulatory information

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

Directive 2012/18/EU
Named dangerous substances - ANNEX I None of the ingredients 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 Conditions of restriction: 3
DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II

None of the ingredients is listed.
REGULATION (EU) 2019/1148
Annex I - RESTRICTED EXPLOSIVES PRECURSORS (Upper limit value for the purpose of licensing under Article 5(3))

None of the ingredients is listed.
Annex II - REPORTABLE EXPLOSIVES PRECURSORS

67-64-1 acetone

National regulations:

Breakdown regulations:

Class	Share in %
NK	**>50**

Waterhazard class: Water hazard class 2 (Self-assessment): hazardous for water.
15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

Relevant phrases
H220 Extremely flammable gas.
H225 Highly flammable liquid and vapour.
H226 Flammable liquid and vapour.
H280 Contains gas under pressure; may explode if heated.
H304 May be fatal if swallowed and enters airways.
H312 Harmful in contact with skin.
H315 Causes skin irritation.

(Contd. on page 9)

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date 22.08.2022 Version number 25 Revision: 22.08.2022

Trade name: Release Agent Mikon® F-57 Spray

(Contd. of page 8)

H319 Causes serious eye irritation.
H331 Toxic if inhaled.
H332 Harmful if inhaled.
H335 May cause respiratory irritation.
H336 May cause drowsiness or dizziness.
H373 May cause damage to organs through prolonged or repeated exposure.
H411 Toxic to aquatic life with long lasting effects.

Department issuing SDS: Quality Management
Abbreviations and acronyms:
Flam. Gas 1A: Flammable gases – Category 1A
Aerosol 1: Aerosols – Category 1
Press. Gas (Comp.): Gases under pressure – Compressed gas
Flam. Liq. 2: Flammable liquids – Category 2
Flam. Liq. 3: Flammable liquids – Category 3
Acute Tox. 4: Acute toxicity – Category 4
Acute Tox. 3: Acute toxicity – Category 3
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
STOT RE 2: Specific target organ toxicity (repeated exposure) – Category 2
Asp. Tox. 1: Aspiration hazard – Category 1
Aquatic Chronic 2: Hazardous to the aquatic environment - long-term aquatic hazard – Category 2