SAFETY DATA SHEET

(REACH regulation (EC) n° 1907/2006 - n° 2020/878)

SECTION 1: IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

1.1. Product identifier

Product name: MERCALIN MARKER FLUO

Product code: 4761--.

UFI: WQ23-P05A-600G-QM5F

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

1.3. Details of the supplier of the safety data sheet

Registered company name: TECHNIMA NORDIC AB. Address: Krokslätts Torg 5.431 37 .Mölndal.SWEDEN.

Telephone: +46(0)31102190. Fax:.

1.4. Emergency telephone number: +33 (0)1 45 42 59 59.

Association/Organisation: INRS / ORFILA http://www.centres-antipoison.net.

SECTION 2: HAZARDS IDENTIFICATION

2.1. Classification of the substance or mixture

In compliance with EC regulation No. 1272/2008 and its amendments.

Aerosol, Category 1 (Aerosol 1, H222 - H229).

This mixture does not present a health hazard with the exception of possible occupational exposure thresholds (see paragraphs 3 and 8).

This mixture does not present an environmental hazard. No known or foreseeable environmental damage under standard conditions of use.

The propellant gas is not taken into account when determining the health and environmental classification of the mixture.

2.2. Label elements

Mixture for aerosol application.

In compliance with EC regulation No. 1272/2008 and its amendments.

Hazard pictograms:



GHS02

Signal Word : DANGER

Hazard statements:

H222 Extremely flammable aerosol.

H229 Pressurised container: May burst if heated.

Precautionary statements - General:

P102 Keep out of reach of children.

Precautionary statements - Prevention :

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.

Precautionary statements - Storage :

P410 + P412 Protect from sunlight. Do not expose to temperatures exceeding 50 °C/122 °F.

2.3. Other hazards

The mixture does not contain substances classified as 'Substances of Very High Concern' (SVHC) >= 0.1% published by the European CHemicals Agency (ECHA) under article 57 of REACH: http://echa.europa.eu/fr/candidate-list-table

The mixture fulfils neither the PBT nor the vPvB criteria for mixtures in accordance with annexe XIII of the REACH regulations EC 1907/2006.

The mixture does not contain substances> = 0.1% with endocrine disrupting properties in accordance with the criteria of the Delegated Regulation (EU) 2017/2100 of the Commission or Regulation (EU) 2018/605 of the Commission.

SECTION 3: COMPOSITION/INFORMATION ON INGREDIENTS

3.2. Mixtures

Composition:

Identification	(EC) 1272/2008	Note	%
INDEX: 601-004-00-0	GHS02, GHS04	С	10 <= x % < 25
CAS: 106-97-8	Dgr	[1]	
EC: 203-448-7	Flam. Gas 1, H220	[7]	
REACH: 01-2119474691-32			
BUTANE			
CAS: 74-98-6	GHS02	[1]	10 <= x % < 25
EC: 200-827-9	Dgr	[7]	
REACH: 01-2119486944-21	Flam. Gas 1, H220		
PROPANE			
EC: 918-481-9	GHS08	Р	2.5 <= x % < 10
REACH: 01-2119457273-39	Dgr		
	Asp. Tox. 1, H304		
HYDROCARBONS, C10-C13,	EUH:066		
N-ALKANES, ISOALKANES, CYCLICS,			
<2% AROMATICS			
EC: 927-241-2	GHS08, GHS07, GHS02	Р	2.5 <= x % < 10
REACH: 01-2119471843-32	Dgr		
	Flam. Liq. 3, H226		
HYDROCARBONS, C9-C10,	Asp. Tox. 1, H304		
N-ALKANES, ISOALKANES, CYCLICS,	STOT SE 3, H336		
< 2% AROMATICS	Aquatic Chronic 3, H412		
	EUH:066		
CAS: 75-28-5	GHS02	[1]	10 <= x % < 25
EC: 200-857-2	Dgr	[7]	
REACH: 01-2119485395-27	Flam. Gas 1, H220		
ISOBUTANE (CONTENANT MOINS DE			
0.1% DE BUTADIENE)			
NDEX: 607-195-00-7	GHS02	[1]	2.5 <= x % < 10
CAS: 108-65-6	Wng		
EC: 203-603-9	Flam. Liq. 3, H226		
REACH: 01-2119475791-29			
2-METHOXY-1-METHYLETHYL ACETATE			
INDEX: 607-022-00-5	GHS02, GHS07	[1]	0 <= x % < 2.5
CAS: 141-78-6	Dgr		
EC: 205-500-4	Flam. Liq. 2, H225		
REACH: 01-2119475103-46	Eye Irrit. 2, H319		
	STOT SE 3, H336		
	3101323,11330		

Information on ingredients :

(Full text of H-phrases: see section 16)

[1] Substance for which maximum workplace exposure limits are available.

[7] Propellant gas

Note P: The carcinogen or mutagen classification does not apply because the substance contains less than 0.1 % w/w of benzene (EINECS 200-753-7).

SECTION 4: FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor.

NEVER induce swallowing by an unconscious person.

4.1. description of first aid measures

In the event of splashes or contact with eyes :

Wash thoroughly with fresh, clean water for 15 minutes holding the eyelids open.

In the event of swallowing:

In the event of swallowing, if the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor.

Keep the person exposed at rest. Do not force vomiting.

Seek medical attention, showing the label.

If swallowed accidentally, call a doctor to ascertain whether observation and hospital care will be necessary. Show the label.

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

No data available.

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

No data available

SECTION 5: FIREFIGHTING MEASURES

Flammable.

Chemical powders, carbon dioxide and other extinguishing gas are suitable for small fires.

5.1. Extinguishing media

In the event of fire, use specifically suitable extinguishing agents. Never use water.

Keep packages near the fire cool, to prevent pressurised containers from bursting.

Suitable methods of extinction

In the event of a fire, use:

- sprayed water or water mist
- water with AFFF (Aqueous Film Forming Foam) additive
- halon
- foam
- multipurpose ABC powder
- BC powder
- carbon dioxide (CO2)

Prevent the effluent of fire-fighting measures from entering drains or waterways.

Unsuitable methods of extinction

In the event of a fire, do not use:

- water
- water jet

5.2. Special hazards arising from the substance or mixture

A fire will often produce a thick black smoke. Exposure to decomposition products may be hazardous to health.

Do not breathe in smoke.

In the event of a fire, the following may be formed:

- carbon monoxide (CO)
- carbon dioxide (CO2)

5.3. Advice for firefighters

Fire-fighting personnel are to be equipped with autonomous insulating breathing apparatus.

SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1. Personal precautions, protective equipment and emergency procedures

Consult the safety measures listed under headings 7 and 8.

For non first aid worker

Because of the organic solvents contained in the mixture, eliminate sources of ignition and ventilate the area.

For first aid worker

First aid workers will be equipped with suitable personal protective equipment (See section 8).

6.2. Environmental precautions

Contain and control the leaks or spills with non-combustible absorbent materials such as sand, earth, vermiculite, diatomaceous earth in drums for waste disposal.

Prevent any material from entering drains or waterways.

6.3. Methods and material for containment and cleaning up

Clean preferably with a detergent, do not use solvents.

6.4. Reference to other sections

No data available.

SECTION 7: HANDLING AND STORAGE

Requirements relating to storage premises apply to all facilities where the mixture is handled.

7.1. Precautions for safe handling

Always wash hands after handling.

Ensure that there is adequate ventilation, especially in confined areas.

Fire prevention:

Handle in well-ventilated areas.

Vapours are heavier than air. They can spread along the ground and form mixtures that are explosive with air.

Prevent the formation of flammable or explosive concentrations in air and avoid vapor concentrations higher than the occupational exposure limits

Do not spray on a naked flame or any incandescent material.

Do not pierce or burn, even after use.

Use the mixture in premises free of naked flames or other sources of ignition and ensure that electrical equipment is suitably protected.

Keep packages tightly closed and away from sources of heat, sparks and naked flames.

Do not use tools which may produce sparks. Do not smoke.

Prevent access by unauthorised personnel.

Recommended equipment and procedures :

For personal protection, see section 8.

Observe precautions stated on label and also industrial safety regulations.

Never pour water into this mixture.

Do not breathe in aerosols.

Packages which have been opened must be reclosed carefully and stored in an upright position.

Prohibited equipment and procedures:

No smoking, eating or drinking in areas where the mixture is used.

7.2. Conditions for safe storage, including any incompatibilities

No data available.

Storage

Keep out of reach of children.

Keep the container tightly closed in a dry, well-ventilated place.

Keep away from all sources of ignition - do not smoke.

Keep well away from all sources of ignition, heat and direct sunlight.

The floor must be impermeable and form a collecting basin so that, in the event of an accidental spillage, the liquid cannot spread beyond this area.

Pressurised container: protect from sunlight and do not expose to temperatures exceeding 50°C.

Packaging

Always keep in packaging made of an identical material to the original.

7.3. Specific end use(s)

No data available.

SECTION 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1. Control parameters

Occupational exposure limits :

 $- \ \, \text{European Union } \ \, (2022/431, \ 2019/1831, \ 2017/2398, \ 2017/164, \ 2009/161, \ 2006/15/CE, \ 2000/39/CE, \ 98/24/CE): \ \, (2009/161, \ 2006/15/CE, \ 2000/39/CE, \ 2000/3$

CAS	VME-mg/m3:	VME-ppm:	VLE-mg/m3:	VLE-ppm:	Notes:
108-65-6	275	50	550	100	Peau
141-78-6	734	200	1468	400	-

- ACGIH TLV (American Conference of Governmental Industrial Hygienists, Threshold Limit Values, 2010):

CAS	TWA:	STEL:	Ceiling :	Definition :	Criteria :
106-97-8	1000 ppm				
74-98-6	1000 ppm				
75-28-5	1000 ppm				
141-78-6	400 ppm				

- Denmark (2020) :

Stof	TWA	VSTEL	Loftvaerdi	Anm	
106-97-8	500 ppm				
	1200 mg/m ³				
74-98-6	1000 ppm				
	1800 mg/m³				
108-65-6	50 ppm			EH	
	275 mg/m³				
141-78-6	150 ppm			E	
	540 mg/m ³				

⁻ France (INRS - Outils 65 / 2021-1849, 2021-1763, decree of 09/12/2021):

8.2. Exposure controls

200 ppm

734 mg/m³

141-78-6

Personal protection measures, such as personal protective equipment

Pictogram(s) indicating the obligation of wearing personal protective equipment (PPE):

400 ppm

1468 mg/m³



Use personal protective equipment that is clean and has been properly maintained.

Store personal protective equipment in a clean place, away from the work area.

Never eat, drink or smoke during use. Remove and wash contaminated clothing before re-using. Ensure that there is adequate ventilation, especially in confined areas.

- Eye / face protection

Avoid contact with eyes.

Use eye protectors designed to protect against liquid splashes

Before handling, wear safety goggles in accordance with standard EN166.

- Hand protection

Wear suitable protective gloves in the event of prolonged or repeated skin contact.

Type of gloves recommended:

- Nitrile rubber (butadiene-acrylonitrile copolymer rubber (NBR))
- PVA (Polyvinyl alcohol)

- Body protection

Work clothing worn by personnel shall be laundered regularly.

After contact with the product, all parts of the body that have been soiled must be washed.

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES 9.1. Information on basic physical and chemical properties Physical state Physical state: Viscous liquid. Colour Various Odour Odour threshold: Not stated. **Melting point** Melting point/melting range: Not relevant. Freezing point Freezing point / Freezing range : Not stated. Boiling point or initial boiling point and boiling range Boiling point/boiling range : Not relevant **Flammability** Flammability (solid, gas): Not stated. Lower and upper explosion limit Explosive properties, lower explosivity limit (%): Not stated. Explosive properties, upper explosivity limit (%): Not stated. Flash point Flash point interval: Not relevant. **Auto-ignition temperature** Self-ignition temperature : Not relevant. **Decomposition temperature** Decomposition point/decomposition range: Not relevant. рΗ pH (aqueous solution): Not stated. pH: Not relevant. Kinematic viscosity Viscosity: Not stated. Solubility Water solubility: Insoluble. Fat solubility: Not stated Partition coefficient n-octanol/water (log value) Partition coefficient: n-octanol/water: Not stated.

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Vapour pressure (50°C) :	Not relevant.			
Density and/or relative density				
Density:	< 1			
Relative vapour density				
Vapour density :	Not stated.			

9.2. Other information

No data available.

9.2.1. Information with regard to physical hazard classes

No data available.

Aerosols

Chemical combustion heat :	Not specified.
Inflammation time :	Not specified.
Deflagration density:	Not specified.
Inflammation distance :	Not specified.
Flame height :	Not specified.
Flame duration :	Not specified.

9.2.2. Other safety characteristics

No data available.

SECTION 10: STABILITY AND REACTIVITY

10.1. Reactivity

No data available.

10.2. Chemical stability

This mixture is stable under the recommended handling and storage conditions in section 7.

10.3. Possibility of hazardous reactions

When exposed to high temperatures, the mixture can release hazardous decomposition products, such as carbon monoxide and dioxide, fumes and nitrogen oxide.

10.4. Conditions to avoid

Any apparatus likely to produce a flame or to have a metallic surface at high temperature (burners, electric arcs, furnaces etc.) must not be allowed on the premises.

Avoid:

- heating
- heat
- humidity

Protect from moisture. Reaction with water can cause an exothermic reaction.

10.5. Incompatible materials

Keep away from:

- water

10.6. Hazardous decomposition products

The thermal decomposition may release/form:

- carbon monoxide (CO)
- carbon dioxide (CO2)

SECTION 11: TOXICOLOGICAL INFORMATION

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

Splashes in the eyes may cause irritation and reversible damage

11.1.1. Substances

Acute toxicity :

HYDROCARBONS, C9-C10, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

Oral route : LD50 > 5000 mg/kg

Species: Rat

OCDE Ligne directrice 401 (Toxicité aiguë par voie orale)

Dermal route : LD50 > 5000 mg/kg

Species : Rabbit

OCDE Ligne directrice 402 (Toxicité aiguë par voie cutanée)

Inhalation route (Dusts/mist): LC50 > 5000 mg/m3

Species: Rat

OCDE Ligne directrice 403 (Toxicité aiguë par inhalation)

HYDROCARBONS, C10-C13, N-ALKANES, ISOALKANES, CYCLICS, <2% AROMATICS

Oral route : LD50 > 5000 mg/kg

Species: Rat

OCDE Ligne directrice 401 (Toxicité aiguë par voie orale)

Dermal route: LD50 > 2000 mg/kg

Species: Rat

OCDE Ligne directrice 402 (Toxicité aiguë par voie cutanée)

Inhalation route (Vapours): LC50 5000

11.1.2. Mixture

No toxicological data available for the mixture.

11.2. Information on other hazards

SECTION 12: ECOLOGICAL INFORMATION

12.1. Toxicity

12.1.2. Mixtures

No aquatic toxicity data available for the mixture.

12.2. Persistence and degradability

12.2.1. Substances

HYDROCARBONS, C9-C10, N-ALKANES, ISOALKANES, CYCLICS, < 2% AROMATICS

Biodegradability: no degradability data is available, the substance is considered as not

degrading quickly.

12.3. Bioaccumulative potential

No data available.

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

No data available.

12.6. Endocrine disrupting properties

No data available.

12.7. Other adverse effects

No data available.

SECTION 13: DISPOSAL CONSIDERATIONS

Proper waste management of the mixture and/or its container must be determined in accordance with Directive 2008/98/EC.

13.1. Waste treatment methods

Do not pour into drains or waterways.

Waste:

Waste management is carried out without endangering human health, without harming the environment and, in particular without risk to water, air, soil, plants or animals.

Recycle or dispose of waste in compliance with current legislation, preferably via a certified collector or company.

Do not contaminate the ground or water with waste, do not dispose of waste into the environment.

Soiled packaging :

Empty container completely. Keep label(s) on container.

Give to a certified disposal contractor.

SECTION 14: TRANSPORT INFORMATION

Transport product in compliance with provisions of the ADR for road, RID for rail, IMDG for sea and ICAO/IATA for air transport (ADR 2021 - IMDG 2020 [40-20] - ICAO/IATA 2022 [63]).

14.1. UN number or ID number

1950

14.2. UN proper shipping name

UN1950=AEROSOLS, flammable

14.3. Transport hazard class(es)

- Classification:



14.4. Packing group

14.5. Environmental hazards

14.6. Special precautions for user

ADR/RID	Class	Code	Pack gr.	Label	Ident.	LQ	Provis.	EQ	Cat.	Tunne
	2	5F	-	2.1	-	1 L	190 327 344 625	E0	2	D
IMDG	Class	2°Label	Pack gr.	LQ	EMS	Provis.	EQ	Stowage Handling	Segregati	
	2	See SP63	-	See SP277	F-D. S-U	63 190 277 327 344 381 959	E0	- SW1 SW22	SG69	
IATA	Class	2°Label	Pack gr.	Passager	Passager	Cargo	Cargo	note	EQ	
	2.1	-	-	203	75 kg	203	150 kg	A145 A167 A802	E0	
	2.1	-	-	Y203	30 kg G	-	-	A145 A167 A802	E0	

For limited quantities, see part 2.7 of the OACI/IATA and chapter 3.4 of the ADR and IMDG.

For excepted quantities, see part 2.6 of the OACI/IATA and chapter 3.5 of the ADR and IMDG.

14.7. Maritime transport in bulk according to IMO instruments

No data available.

SECTION 15: Regulatory information

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

- Classification and labelling information included in section 2:

The following regulations have been used:

- EU Regulation No. 1272/2008 amended by EU Regulation No. 2022/692 (ATP 18)

- Container information:

The mixture does not contain any substance restricted under Annex XVII of Regulation (EC) No. 1907/2006 (REACH): https://echa.europa.eu/substances-restricted-under-reach.

- Particular provisions :

No data available.

- Swiss ordinance on the incentive tax on volatile organic compounds :

75-28-5 2-méthylpropane (alcool isobutylique,isobutane)

acétate de 1-méthoxy-2-propyle 108-65-6

acétate d'éthyle 141-78-6 74-98-6 propane 106-97-8 n-butane

15.2. Chemical safety assessment

No data available.

SECTION 16: OTHER INFORMATION

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The mixture must not be used for other uses than those specified in section 1 without having first obtained written handling instructions. It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information in this safety data sheet must be regarded as a description of the safety requirements relating to the mixture and not as a guarantee of the properties thereof.

Wording of the phrases mentioned in section 3:

H220	Extremely flammable gas.
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H304	May be fatal if swallowed and enters airways.
H319	Causes serious eye irritation.
H336	May cause drowsiness or dizziness.
H412	Harmful to aquatic life with long lasting effects.
EUH066	Repeated exposure may cause skin dryness or cracking.

Abbreviations:

LD50 : The dose of a test substance resulting in 50% lethality in a given time period. LC50 : The concentration of a test substance resulting in 50% lethality in a given period. REACH : Registration, Evaluation, Authorization and Restriction of Chemical Substances.

UFI: Unique formulation identifier.
STEL: Short-term exposure limit
TWA: Time Weighted Averages
TMP: French Occupational Illness table
TLV: Threshold Limit Value (exposure)
AEV: Average Exposure Value.

ADR: European agreement concerning the international carriage of dangerous goods by Road.

IMDG: International Maritime Dangerous Goods. IATA: International Air Transport Association. ICAO: International Civil Aviation Organisation

RID: Regulations concerning the International carriage of Dangerous goods by rail.

WGK: Wassergefahrdungsklasse (Water Hazard Class).

GHS02: Flame

PBT: Persistent, bioaccumulable and toxic. vPvB: Very persistent, very bioaccumulable. SVHC: Substances of very high concern.