Safety Data Sheet

According to Annex II to REACH - Regulation 2015/830

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

1.1. Product identifier

Code:

Product name **PERMANENT CAP OFF RED**

UFI :

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

Intended use **PERMANENT MARKER INK**

Identified Uses	Industrial	Professional	Consumer
Inks	✔	✔	✔

Uses Advised Against

Do not use for purposes other than those specified

1.3. Details of the supplier of the safety data sheet

Name
Full address
District and Country

Hainenko Limited
284 Chase Road
London
N14 6HF
Tel: 0044 (0) 20 8882 8734
Fax: 0044 (0) 20 8882 7749

e-mail address of the competent person responsible for the Safety Data Sheet **d.ashpole@hainenko.com**

1.4. Emergency telephone number

For urgent inquiries refer to 0044 (0) 20 8882 8734 *(only available during office hours)*

SECTION 2. Hazards identification

2.1. Classification of the substance or mixture

The product is classified as hazardous pursuant to the provisions set forth in (EC) Regulation 1272/2008 (CLP) (and subsequent amendments and supplements). The product thus requires a safety datasheet that complies with the provisions of (EU) Regulation 2015/830.
Any additional information concerning the risks for health and/or the environment are given in sections 11 and 12 of this sheet.

Hazard classification and indication:

Flammable liquid, category 2	H225	Highly flammable liquid and vapour.
Eye irritation, category 2	H319	Causes serious eye irritation.
Skin sensitization, category 1A	H317	May cause an allergic skin reaction.
Specific target organ toxicity - single exposure, category 3	H336	May cause drowsiness or dizziness.
Hazardous to the aquatic environment, chronic toxicity, category 3	H412	Harmful to aquatic life with long lasting effects.

2.2. Label elements

Hazard labelling pursuant to EC Regulation 1272/2008 (CLP) and subsequent amendments and supplements.

Hazard pictograms:

Signal words: Danger

Hazard statements:

H225	Highly flammable liquid and vapour.
H319	Causes serious eye irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.
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.
P280	Wear protective gloves/ protective clothing / eye protection / face protection.
P370+P378	In case of fire: use extinguishing media appropriate to extinguish.
P261	Avoid breathing dust / fume / gas / mist / vapours / spray.
P233	Keep container tightly closed.
P312	Call a POISON CENTRE / a doctor / a center suitable for emergency medical advice if you feel unwell.

Contains: AMINES,C12-14-TERT-ALKYL, BIS[2-[(4,5-DIHYDRO-3-METHYL-5-OXO-1-PHENYL-1H-PYRAZOL-4-YL)AZO]BENZOATO(2-)]CHROMATE(1-)
1-METHOXYPROPAN-2-OL

PROPAN-2-OL

ISOBUTYL ALCOHOL

2.3. Other hazards

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

SECTION 3. Composition/information on ingredients

3.2. Mixtures

Contains:

Identification	x = Conc. %	Classification 1272/2008 (CLP)
ETHANOL		
CAS 64-17-5	55 ≤ x < 60	Flam. Liq. 2 H225, Eye Irrit. 2 H319
EC 200-578-6		
INDEX 603-002-00-5		
Reg. no. 01-2119457610-43-xxxx		
1-METHOXYPROPAN-2-OL		
CAS 107-98-2	10 ≤ x < 13	Flam. Liq. 3 H226, STOT SE 3 H336
EC 203-539-1		
INDEX 603-064-00-3		
Reg. no. 01-2119457435-35-xxxx		
PROPAN-2-OL		
CAS 67-63-0	5 ≤ x < 7	Flam. Liq. 2 H225, Eye Irrit. 2 H319, STOT SE 3 H336
EC 200-661-7		
INDEX 603-117-00-0		
Reg. no. 01-2119457558-25-xxxx		
AMINES,C12-14-TERT-ALKYL, BIS[2-[(4,5-DIHYDRO-3-METHYL-5-OXO-1-PHENYL-1H-PYRAZOL-4-YL)AZO]BENZOATO(2-)]CHROMATE(1-)		
CAS 85408-46-4	5 ≤ x < 7	Skin Sens. 1A H317, Aquatic Chronic 2 H411
EC 287-007-4		
INDEX -		
Reg. no. 01-2120766190-58-xxxx		
3',6'-BIS(DIETHYLAMINO)SPIRO[ISOBENZOFURAN-1(3H),9'-[9H]XANTHENE]-3-ONE		
CAS 509-34-2	1 ≤ x < 2,5	Acute Tox. 4 H302, Eye Irrit. 2 H319, Aquatic Chronic 2 H411
EC 208-096-8		
INDEX -		
Reg. no. 01-2120225998-40-xxxx		
ISOBUTYL ALCOHOL		
CAS 78-83-1	1 ≤ x < 3	Flam. Liq. 3 H226, Eye Dam. 1 H318, Skin Irrit. 2 H315, STOT SE 3 H335, STOT SE 3 H336
EC 201-148-0		
INDEX 603-108-00-1		

Reg. no. 01-2119484609-23-xxxx

METHANOL

CAS 67-56-1 | 0 ≤ x < 0,5 | Flam. Liq. 2 H225, Acute Tox. 3 H301, Acute Tox. 3 H311, Acute Tox. 3 H331, STOT SE 1 H370

EC 200-659-6

INDEX 603-001-00-X

Reg. no. 01-2119433307-44-xxxx

The full wording of hazard (H) phrases is given in section 16 of the sheet.

SECTION 4. First aid measures

4.1. Description of first aid measures

EYES: Remove contact lenses, if present. Wash immediately with plenty of water for at least 15 minutes, opening the eyelids fully. If problem persists, seek medical advice.
SKIN: Remove contaminated clothing. Rinse skin with a shower immediately. Wash contaminated clothing before using it again.
INHALATION: Remove to open air. If the subject stops breathing, administer artificial respiration. Get medical advice/attention immediately.
INGESTION: Get medical advice/attention immediately. Do not induce vomiting. Do not administer anything not explicitly authorised by a doctor.

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

Specific information on symptoms and effects caused by the product are unknown.

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

Information not available

SECTION 5. Firefighting measures

5.1. Extinguishing media

SUITABLE EXTINGUISHING EQUIPMENT
Extinguishing substances are: carbon dioxide, foam, chemical powder. For product loss or leakage that has not caught fire, water spray can be used to disperse flammable vapours and protect those trying to stem the leak.
UNSUITABLE EXTINGUISHING EQUIPMENT
Do not use jets of water. Water is not effective for putting out fires but can be used to cool containers exposed to flames to prevent explosions.

5.2. Special hazards arising from the substance or mixture

HAZARDS CAUSED BY EXPOSURE IN THE EVENT OF FIRE
Excess pressure may form in containers exposed to fire at a risk of explosion. Do not breathe combustion products.

5.3. Advice for firefighters

GENERAL INFORMATION
Use jets of water to cool the containers to prevent product decomposition and the development of substances potentially hazardous for health. Always wear full fire prevention gear. Collect extinguishing water to prevent it from draining into the sewer system. Dispose of contaminated water used for extinction and the remains of the fire according to applicable regulations.
SPECIAL PROTECTIVE EQUIPMENT FOR FIRE-FIGHTERS
Normal fire fighting clothing i.e. fire kit (BS EN 469), gloves (BS EN 659) and boots (HO specification A29 and A30) in combination with self-contained open circuit positive pressure compressed air breathing apparatus (BS EN 137).

SECTION 6. Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Block the leakage if there is no hazard.
Wear suitable protective equipment (including personal protective equipment referred to under Section 8 of the safety data sheet) to prevent any contamination of skin, eyes and personal clothing. These indications apply for both processing staff and those involved in emergency procedures.

Send away individuals who are not suitably equipped. Use explosion-proof equipment. Eliminate all sources of ignition (cigarettes, flames, sparks, etc.) from the leakage site.

6.2. Environmental precautions

The product must not penetrate into the sewer system or come into contact with surface water or ground water.

6.3. Methods and material for containment and cleaning up

Collect the leaked product into a suitable container. Evaluate the compatibility of the container to be used, by checking section 10. Absorb the remainder with inert absorbent material.
Make sure the leakage site is well aired. Contaminated material should be disposed of in compliance with the provisions set forth in point 13.

6.4. Reference to other sections

Any information on personal protection and disposal is given in sections 8 and 13.

SECTION 7. Handling and storage

7.1. Precautions for safe handling

Keep away from heat, sparks and naked flames; do not smoke or use matches or lighters. Without adequate ventilation, vapours may accumulate at ground level and, if ignited, catch fire even at a distance, with the danger of backfire. Avoid bunching of electrostatic charges. When performing transfer operations involving large containers, connect to an earthing system and wear antistatic footwear. Vigorous stirring and flow through the tubes and equipment may cause the formation and accumulation of electrostatic charges. In order to avoid the risk of fires and explosions, never use compressed air when handling. Open containers with caution as they may be pressurised. Do not eat, drink or smoke during use. Avoid leakage of the product into the environment.

7.2. Conditions for safe storage, including any incompatibilities

Store only in the original container. Store the containers sealed, in a well ventilated place, away from direct sunlight. Store in a cool and well ventilated place, keep far away from sources of heat, naked flames and sparks and other sources of ignition. Keep containers away from any incompatible materials, see section 10 for details.

7.3. Specific end use(s)

Information not available

SECTION 8. Exposure controls/personal protection

8.1. Control parameters

Regulatory References:

BGR	България	НАРЕДБА № 13 ОТ 30 ДЕКЕМВРИ 2003 Г. ЗА ЗАЩИТА НА РАБОТЕЩИТЕ ОТ РИСКОВЕ, СВЪРЗАНИ С ЕКСПОЗИЦИЯ НА ХИМИЧНИ АГЕНТИ ПРИ РАБОТА (изм. ДВ. бр.5 от 17 Януари 2020г.)
CZE	Česká Republika	Nařízení vlády č. 41/2020 Sb. Nařízení vlády, kterým se mění nařízení vlády č. 361/2007 Sb., kterým se stanoví podmínky ochrany zdraví při práci, ve znění pozdějších předpisů
DEU	Deutschland	Technischen Regeln für Gefahrstoffe (TRGS 900) - Liste der Arbeitsplatzgrenzwerte und Kurzzeitwerte. MAK- und BAT-Werte-Liste 2020, Ständige Senatskommission zur Prüfung gesundheitsschädlicher Arbeitsstoffe, Mitteilung 56
ESP	España	Límites de exposición profesional para agentes químicos en España 2019
FRA	France	Valeurs limites d'exposition professionnelle aux agents chimiques en France. ED 984 - INRS
HUN	Magyarország	Az innovációért és technológiáért felelős miniszter 5/2020. (II. 6.) ITM rendelete a kémiai kóroki tényezők hatásának kitett munkavállalók egészségének és biztonságának védelméről
ITA	Italia	Decreto Legislativo 9 Aprile 2008, n.81
NLD	Nederland	Arbeidsomstandighedenregeling. Lijst van wettelijke grenswaarden op grond van de artikelen 4.3, eerste lid, en 4.16, eerste lid, van het Arbeidsomstandighedenbesluit
POL	Polska	Rozporządzenie Ministra Rodziny, Pracy i Polityki Społecznej z dnia 12 czerwca 2018 r. w sprawie najwyższych dopuszczalnych stężeń i natężeń czynników szkodliwych dla zdrowia w środowisku pracy
SWE	Sverige	Hygieniska gränsvärden, Arbetsmiljöverkets föreskrifter och allmänna råd om hygieniska gränsvärden (AFS 2018:1)
SVN	Slovenija	Pravilnik o varovanju delavcev pred tveganji zaradi izpostavljenosti kemičnim snovem pri delu (Uradni list RS, št. 100/01, 39/05, 53/07, 102/10, 43/11 – ZVZD-1, 38/15, 78/18 in 78/19)
GBR	United Kingdom	EH40/2005 Workplace exposure limits (Fourth Edition 2020)
EU	OEL EU	Directive (EU) 2019/1831; Directive (EU) 2019/130; Directive (EU) 2019/983; Directive (EU) 2017/2398; Directive (EU) 2017/164; Directive 2009/161/EU; Directive 2006/15/EC; Directive 2004/37/EC; Directive 2000/39/EC; Directive 98/24/EC; Directive 91/322/EEC.
	TLV-ACGIH	ACGIH 2020

ETHANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	1000				
TLV	CZE	1000		3000		
AGW	DEU	960	500	1920	1000	
MAK	DEU	960	500	1920	1000	
VLA	ESP			1910	1000	
VLEP	FRA	1900	1000	9500	5000	
AK	HUN	1900		7600		
TGG	NLD	260		1900		SKIN
NDS/NDSCh	POL	1900				
NGV/KGV	SWE	1000	500	1900	1000	
WEL	GBR	1920	1000			
TLV-ACGIH		1884	1000			

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,96	mg/l
Normal value in marine water	0,79	mg/l
Normal value for fresh water sediment	3,6	mg/kg
Normal value for marine water sediment	2,9	mg/kg
Normal value for water, intermittent release	2,75	mg/l
Normal value of STP microorganisms	580	mg/l
Normal value for the food chain (secondary poisoning)	380	mg/kg
Normal value for the terrestrial compartment	0,63	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			NPI	87 mg/kg bw/d				
Inhalation	NPI	NPI	NPI	114 mg/m3	NPI	NPI	NPI	950 mg/m3
Skin	NPI	NPI	NPI	206 mg/kg bw/d	NPI	NPI	NPI	343 mg/kg bw/d

1-METHOXYPROPAN-2-OL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	375	100	568	150	SKIN
TLV	CZE	270	72,09	550	146,85	SKIN
AGW	DEU	370	100	740	200	
MAK	DEU	370	100	740	200	
VLA	ESP	375	100	568	150	SKIN
VLEP	FRA	188	50	375	100	SKIN
AK	HUN	375		568		SKIN
VLEP	ITA	375	100	568	150	SKIN
TGG	NLD	375		563		SKIN
NDS/NDSCh	POL	180		360		SKIN
NGV/KGV	SWE	190	50	568	150	SKIN
MV	SVN	375	100	568	150	SKIN
WEL	GBR	375	100	560	150	SKIN
OEL	EU	375	100	568	150	SKIN
TLV-ACGIH		184	50	368	100	

Predicted no-effect concentration - PNEC		
Normal value in fresh water	10	mg/l
Normal value in marine water	1	mg/l
Normal value for fresh water sediment	52,3	mg/kg
Normal value for marine water sediment	5,2	mg/kg
Normal value for water, intermittent release	100	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	4,59	mg/kg
Normal value for the atmosphere	NPI	

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	33 mg/kg bw/d				
Inhalation			NPI	43,9 mg/m3	553,5 mg/m3	553,5 mg/m3	NPI	369 mg/m3
Skin			NPI	78 mg/kg bw/d			NPI	183 mg/kg bw/d

PROPAN-2-OL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	980		1225		
TLV	CZE	500		1000		SKIN
AGW	DEU	500	200	1000	400	
MAK	DEU	500	200	1000	400	
VLA	ESP	500	200	1000	400	
VLEP	FRA			980	400	
AK	HUN	500		2000		
TGG	NLD	650				
NDS/NDSCh	POL	900		1200		
NGV/KGV	SWE	350	150	600	250	
MV	SVN	500	200			
WEL	GBR	999	400	1250	500	
TLV-ACGIH		492	200	983	400	

Predicted no-effect concentration - PNEC		
Normal value in fresh water	140,9	mg/l
Normal value in marine water	140,9	mg/l
Normal value for fresh water sediment	552	mg/kg
Normal value for marine water sediment	552	mg/kg
Normal value for water, intermittent release	140,9	mg/l
Normal value of STP microorganisms	2251	mg/l
Normal value for the food chain (secondary poisoning)	160	mg/kg
Normal value for the terrestrial compartment	28	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral			VND	26 mg/kg bw/d				
Inhalation			VND	89 mg/m3			VND	500 mg/m3
Skin			VND	319 mg/kg bw/d			VND	888 mg/kg bw/d

3',6'-BIS(DIETHYLAMINO)SPIRO[ISOBENZOFURAN-1(3H),9'-[9H]XANTHENE]-3-ONE

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,0034	mg/l
Normal value in marine water	0,00034	mg/l
Normal value for fresh water sediment	0,176	mg/kg
Normal value for marine water sediment	0,0176	mg/kg
Normal value for water, intermittent release	0,034	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,0331	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		VND		1,24 mg/kg bw/d				
Inhalation	VND	VND	VND	1,83 mg/m3	VND	VND	VND	12,2 mg/m3
Skin	VND	VND	VND	1,24 mg/kg bw/d	VND	VND	VND	3,46 mg/kg bw/d

ISOBUTYL ALCOHOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	CZE	300		600		SKIN
AGW	DEU	310	100	310	100	
MAK	DEU	310	100	310	100	
VLA	ESP	154	50			
VLEP	FRA	150	50			
TGG	NLD	150				
NDS/NDSCh	POL	100		200		
NGV/KGV	SWE	150	50	250	75	
WEL	GBR	154	50	231	75	
TLV-ACGIH		152	50			

Predicted no-effect concentration - PNEC		
Normal value in fresh water	0,4	mg/l
Normal value in marine water	0,04	mg/l
Normal value for fresh water sediment	1,56	mg/kg
Normal value for marine water sediment	0,156	mg/kg
Normal value for water, intermittent release	11	mg/l
Normal value of STP microorganisms	10	mg/l
Normal value for the terrestrial compartment	0,076	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Inhalation			55 mg/m3	VND			310 mg/m3	VND

METHANOL

Threshold Limit Value

Type	Country	TWA/8h		STEL/15min		Remarks / Observations
		mg/m3	ppm	mg/m3	ppm	
TLV	BGR	50				SKIN
TLV	CZE	250		1000		SKIN
AGW	DEU	270	200	1080	800	SKIN
MAK	DEU	270	200	1080	800	SKIN
VLA	ESP	266	200			SKIN
VLEP	FRA	260	200	1300	1000	SKIN

AK	HUN	260		1040		
VLEP	ITA	260	200			SKIN
TGG	NLD	133	100			SKIN
NDS/NDSCh	POL	100		300		
NGV/KGV	SWE	250	200	350	250	SKIN
WEL	GBR	266	200	333	250	SKIN
OEL	EU	260	200			SKIN
TLV-ACGIH		262	200	328	250	

Predicted no-effect concentration - PNEC		
Normal value in fresh water	20,8	mg/l
Normal value in marine water	2,08	mg/l
Normal value for fresh water sediment	77	mg/kg
Normal value for marine water sediment	7,7	mg/kg
Normal value for water, intermittent release	1540	mg/l
Normal value of STP microorganisms	100	mg/l
Normal value for the terrestrial compartment	100	mg/kg

Health - Derived no-effect level - DNEL / DMEL

	Effects on consumers				Effects on workers			
Route of exposure	Acute local	Acute systemic	Chronic local	Chronic systemic	Acute local	Acute systemic	Chronic local	Chronic systemic
Oral		4 mg/kg bw/d		4 mg/kg bw/d				
Inhalation	26 mg/m3	26 mg/m3	26 mg/m3	26 mg/m3	130 mg/m3	130 mg/m3	130 mg/m3	130 mg/m3
Skin	NPI	4 mg/kg bw/d	NPI	4 mg/kg bw/d	NPI	20 mg/kg bw/d	NPI	20 mg/kg bw/d

Legend:

(C) = CEILING ; INHAL = Inhalable Fraction ; RESP = Respirable Fraction ; THORA = Thoracic Fraction.

VND = hazard identified but no DNEL/PNEC available ; NEA = no exposure expected ; NPI = no hazard identified.

8.2. Exposure controls

As the use of adequate technical equipment must always take priority over personal protective equipment, make sure that the workplace is well aired through effective local aspiration.
When choosing personal protective equipment, ask your chemical substance supplier for advice.
Personal protective equipment must be CE marked, showing that it complies with applicable standards.

Provide an emergency shower with face and eye wash station.

HAND PROTECTION
Protect hands with category III work gloves (see standard EN 374).
The following should be considered when choosing work glove material: compatibility, degradation, failure time and permeability.
The work gloves' resistance to chemical agents should be checked before use, as it can be unpredictable. The gloves' wear time depends on the duration and type of use.

SKIN PROTECTION
Wear category II professional long-sleeved overalls and safety footwear (see Regulation 2016/425 and standard EN ISO 20344). Wash body with soap and water after removing protective clothing.

Consider the appropriateness of providing antistatic clothing in the case of working environments in which there is a risk of explosion.

EYE PROTECTION
Wear airtight protective goggles (see standard EN 166).

RESPIRATORY PROTECTION
If the threshold value (e.g. TLV-TWA) is exceeded for the substance or one of the substances present in the product, use a mask with a type A filter whose class (1, 2 or 3) must be chosen according to the limit of use concentration. (see standard EN 14387). In the presence of gases or vapours of various kinds and/or gases or vapours containing particulate (aerosol sprays, fumes, mists, etc.) combined filters are required.
Respiratory protection devices must be used if the technical measures adopted are not suitable for restricting the worker's exposure to the threshold values considered. The protection provided by masks is in any case limited.
If the substance considered is odourless or its olfactory threshold is higher than the corresponding TLV-TWA and in the case of an emergency, wear open-circuit compressed air breathing apparatus (in compliance with standard EN 137) or external air-intake breathing apparatus (in compliance with standard EN 138). For a correct choice of respiratory protection device, see standard EN 529.

ENVIRONMENTAL EXPOSURE CONTROLS
The emissions generated by manufacturing processes, including those generated by ventilation equipment, should be checked to ensure compliance with environmental standards.

Product residues must not be indiscriminately disposed of with waste water or by dumping in waterways.

SECTION 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	liquid
Colour	red
Odour	alcoholic
Odour threshold	Not determined
pH	Not applicable
Melting point / freezing point	Not determined
Initial boiling point	> 70 °C
Boiling range	Not determined
Flash point	< 23 °C
Evaporation Rate	Not determined
Flammability of solids and gases	Not available
Lower inflammability limit	Not determined
Upper inflammability limit	Not determined
Lower explosive limit	Not determined
Upper explosive limit	Not determined
Vapour pressure	Not determined
Vapour density	Not determined
Relative density	0,900 +/- 0,050 Kg/L
Solubility	partially soluble in water
Partition coefficient: n-octanol/water	Not determined
Auto-ignition temperature	Not determined
Decomposition temperature	Not determined
Viscosity	Not determined

Explosive properties	Not available
Oxidising properties	Not available

9.2. Other information

VOC (Directive 2010/75/EC) :	76,67 % - 675,50 g/litre
VOC (volatile carbon) :	40,73 %

SECTION 10. Stability and reactivity

10.1. Reactivity

There are no particular risks of reaction with other substances in normal conditions of use.

10.2. Chemical stability

The product is stable in normal conditions of use and storage.

10.3. Possibility of hazardous reactions

The vapours may also form explosive mixtures with the air.

10.4. Conditions to avoid

Avoid overheating. Avoid bunching of electrostatic charges. Avoid all sources of ignition.

10.5. Incompatible materials

Information not available

10.6. Hazardous decomposition products

In the event of thermal decomposition or fire, gases and vapours that are potentially dangerous to health may be released.

SECTION 11. Toxicological information

In the absence of experimental data for the product itself, health hazards are evaluated according to the properties of the substances it contains, using the criteria specified in the applicable regulation for classification.
It is therefore necessary to take into account the concentration of the individual hazardous substances indicated in section 3, to evaluate the toxicological effects of exposure to the product.

11.1. Information on toxicological effects

METHANOL

METHANOL: The minimal lethal dose following ingestion is considered to be in the range of 300-1000 mg/kg. Ingestion of as little as 4-10 ml methanol in adults may cause permanent blindness (IPCS).

Metabolism, toxicokinetics, mechanism of action and other information

Information not available

Information on likely routes of exposure

Information not available

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Information not available

Interactive effects

Information not available

ACUTE TOXICITY

ATE (Inhalation) of the mixture:
> 20 mg/l
ATE (Oral) of the mixture:
>2000 mg/kg
ATE (Dermal) of the mixture:
>2000 mg/kg

ISOBUTYL ALCOHOL

LD50 (Oral) > 2830 mg/kg Rat (Sprague-Dawley) (female) - OECD Guideline 401

LD50 (Dermal) > 2000 mg/kg Rabbit (New Zealand White) (male) - OECD Guideline 402

LC50 (Inhalation) > 18,18 mg/l/6h Rat (Sprague-Dawley)

AMINES,C12-14-TERT-ALKYL, BIS[2-[(4,5-DIHYDRO-3-METHYL-5-OXO-1-PHENYL-1H-PYRAZOL-4-YL)AZO]BENZOATO(2-)]CHROMATE(1-)

LD50 (Oral) > 6000 mg/kg Rat - OECD Guideline 401

LC50 (Inhalation) 9,465 mg/l/4h Rat - OECD Guideline 403

ETHANOL

LD50 (Oral) 10470 mg/kg Rat - OECD Guideline 401

LD50 (Dermal) 17100 mg/kg Rabbit - Standard acute method

LC50 (Inhalation) 124,7 mg/l/4h Rat (Sprague-Dawley) - OECD Guideline 403

1-METHOXYPROPAN-2-OL

LD50 (Oral) 4016 mg/kg Rat (Fischer 344) - EU Method B.1

LD50 (Dermal) > 2000 mg/kg Rat (Fischer 344) - EU Method B.3

LC50 (Inhalation) < 6000 ppm/6h Mouse (B6C3F1) (female) - OECD Guideline 403

METHANOL

LD50 (Oral) > 5000 mg/kg Pig (female)

LD50 (Dermal) 17100 mg/kg Rabbit

LC50 (Inhalation) 128,2 mg/l/4h Rat (Sprague-Dawley)

PROPAN-2-OL

LD50 (Oral) 5000 mg/kg Rat

LD50 (Dermal) 12800 mg/kg Rabbit

LC50 (Inhalation) > 40,86 mg/l/4h Rat

3',6'-BIS(DIETHYLAMINO)SPIRO[ISOBENZOFURAN-1(3H),9'-[9H]XANTHENE]-3-ONE

LD50 (Oral) 500 mg/kg Rat (Sprague-Dawley) (female) - OECD Guideline 423

LD50 (Dermal) > 2000 mg/kg Rat (Sprague-Dawley) - OECD Guideline 402

SKIN CORROSION / IRRITATION

Does not meet the classification criteria for this hazard class

SERIOUS EYE DAMAGE / IRRITATION

Causes serious eye irritation

RESPIRATORY OR SKIN SENSITISATION

Sensitising for the skin

GERM CELL MUTAGENICITY

Does not meet the classification criteria for this hazard class

CARCINOGENICITY

Does not meet the classification criteria for this hazard class

REPRODUCTIVE TOXICITY

Does not meet the classification criteria for this hazard class

STOT - SINGLE EXPOSURE

May cause drowsiness or dizziness

STOT - REPEATED EXPOSURE

Does not meet the classification criteria for this hazard class

ASPIRATION HAZARD

Does not meet the classification criteria for this hazard class

SECTION 12. Ecological information

This product is dangerous for the environment and the aquatic organisms. In the long term, it have negative effects on aquatic environment.

12.1. Toxicity

ISOBUTYL ALCOHOL	
LC50 - for Fish	1430 mg/l/96h Pimephales promelas
EC50 - for Crustacea	1100 mg/l/48h Daphnia pulex
EC50 - for Algae / Aquatic Plants	593 mg/l/72h Pseudokirchnerella subcapitata - OECD Guideline 201
Chronic NOEC for Crustacea	20 mg/l Daphnia magna - Total exposure duration: 21 days
Chronic NOEC for Algae / Aquatic Plants	53 mg/l Pseudokirchnerella subcapitata - OECD Guideline 201 - Total exposure duration: 72h
AMINES,C12-14-TERT-ALKYL, BIS[2-[(4,5-DIHYDRO-3-METHYL-5-OXO-1-PHENYL-1H-PYRAZOL-4-YL)AZO]BENZOATO(2-)]CHROMATE(1-)	
LC50 - for Fish	10 mg/l/96h Danio rerio - OECD Guideline 203
ETHANOL	
LC50 - for Fish	15400 mg/l/96h Lepomis macrochirus - EPA-660/3-75-009, 1975
EC50 - for Crustacea	5012 mg/l/48h Ceriodaphnia dubia - ASTM E729-80
EC50 - for Algae / Aquatic Plants	275 mg/l/72h Chlorella vulgaris - OECD Guideline 201
Chronic NOEC for Fish	250 mg/l Danio rerio - OECD Guideline 212 - Total exposure duration: 120h
Chronic NOEC for Crustacea	9,6 mg/l Ceriodaphnia dubia (Reproduction) - Total exposure duration: 10 d
1-METHOXYPROPAN-2-OL	
LC50 - for Fish	6812 mg/l/96h Leuciscus idus - DIN 38 412, part L15
EC50 - for Crustacea	2954 mg/l/48h Acartia tonsa - ISO TC147/SC5/WG2
EC50 - for Algae / Aquatic Plants	6745 mg/l/72h Skeletonema costatum - ISO 10253
METHANOL	
LC50 - for Fish	290 mg/l/96h Danio rerio (fish embryos) - OECD Guideline 203

EC50 - for Crustacea	18260 mg/l/48h Daphnia magna - OECD Guideline 202

PROPAN-2-OL

LC50 - for Fish	9640 mg/l/96h Pimephales promelas - OECD Guideline 203
EC50 - for Crustacea	13299 mg/l/48h Daphnia magna
EC50 - for Algae / Aquatic Plants	> 1000 mg/l/72h Desmodesmus subspicatus

3',6'-BIS(DIETHYLAMINO)SPIRO[ISOBENZOFURAN-1(3H),9'-[9H]XANTHENE]-3-ONE

LC50 - for Fish	50 mg/l/96h Danio rerio - OECD Guideline 203
EC50 - for Crustacea	3,4 mg/l/48h Daphnia magna - OECD Guideline 202
EC50 - for Algae / Aquatic Plants	13,4 mg/l/72h Desmodesmus subspicatus - OECD Guideline 201

12.2. Persistence and degradability

ISOBUTYL ALCOHOL

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

AMINES,C12-14-TERT-ALKYL, BIS[2-[(4,5-DIHYDRO-3-METHYL-5-OXO-1-PHENYL-1H-PYRAZOL-4-YL)AZO]BENZOATO(2-)]CHROMATE(1-)
NOT rapidly degradable

% Biodegradability: < 10% (28 d) - OECD Guideline 301 B

ETHANOL

Solubility in water	789000 mg/l

Rapidly degradable

1-METHOXYPROPAN-2-OL

Rapidly degradable

METHANOL

Solubility in water	1000 - 10000 mg/l

Rapidly degradable

PROPAN-2-OL

Rapidly degradable

3',6'-BIS(DIETHYLAMINO)SPIRO[ISOBENZOFURAN-1(3H),9'-[9H]XANTHENE]-3-ONE
NOT rapidly degradable

12.3. Bioaccumulative potential

ISOBUTYL ALCOHOL

Partition coefficient: n-octanol/water 1

AMINES,C12-14-TERT-ALKYL, BIS[2-[(4,5-DIHYDRO-3-METHYL-5-OXO-1-PHENYL-1H-PYRAZOL-4-YL)AZO]BENZOATO(2-)]CHROMATE(1-)

Partition coefficient: n-octanol/water 4,6

ETHANOL

Partition coefficient: n-octanol/water -0,35

METHANOL

Partition coefficient: n-octanol/water -0,77

BCF 0,2

12.4. Mobility in soil

ISOBUTYL ALCOHOL

Partition coefficient: soil/water 0,31

12.5. Results of PBT and vPvB assessment

On the basis of available data, the product does not contain any PBT or vPvB in percentage ≥ than 0,1%.

12.6. Other adverse effects

Information not available

SECTION 13. Disposal considerations

13.1. Waste treatment methods

Reuse, when possible. Product residues should be considered special hazardous waste. The hazard level of waste containing this product should be evaluated according to applicable regulations.
Disposal must be performed through an authorised waste management firm, in compliance with national and local regulations.
Waste transportation may be subject to ADR restrictions.
CONTAMINATED PACKAGING
Contaminated packaging must be recovered or disposed of in compliance with national waste management regulations.

SECTION 14. Transport information

14.1. UN number

ADR / RID, IMDG, IATA: 1210

14.2. UN proper shipping name

ADR / RID:	PRINTING INK or PRINTING INK RELATED MATERIAL
IMDG:	PRINTING INK or PRINTING INK RELATED MATERIAL
IATA:	PRINTING INK or PRINTING INK RELATED MATERIAL

14.3. Transport hazard class(es)

ADR / RID:	Class: 3	Label: 3
IMDG:	Class: 3	Label: 3
IATA:	Class: 3	Label: 3

14.4. Packing group

ADR / RID, IMDG, IATA:	II

14.5. Environmental hazards

ADR / RID:	NO
IMDG:	NO
IATA:	NO

14.6. Special precautions for user

ADR / RID:	HIN - Kemler: 33	Limited Quantities: 5 L	Tunnel restriction code: (D/E)
	Special provision: 640D		
IMDG:	EMS: F-E, S-D	Limited Quantities: 5 L	
IATA:	Cargo:	Maximum quantity: 60 L	Packaging instructions: 364
	Pass.:	Maximum quantity: 5 L	Packaging instructions: 353
	Special provision:	A3, A72, A192	

14.7. Transport in bulk according to Annex II of Marpol and the IBC Code

Information not relevant

SECTION 15. Regulatory information

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

Seveso Category - Directive 2012/18/EC: P5c

Restrictions relating to the product or contained substances pursuant to Annex XVII to EC Regulation 1907/2006

Product

Point	3 - 40	

Contained substance

Point	75	3',6'-BIS(DIETHYLAMINO)SPIRO[ISOBENZOFURAN-1(3H),9'-[9H]XANTHENE]-3-ONE Reg. no.: 01-2120225998-40-xxxx
Point	75	ISOBUTYL ALCOHOL Reg. no.: 01-2119484609-23-xxxx
Point	75	METHANOL Reg. no.: 01-2119433307-44-xxxx
Point	75	BUTANOL Reg. no.: 01-2119484630-38-xxxx
Point	75	2-METHOXYPROPANOL
Point	72-75	FORMALDEHYDE Reg. no.: 01-2119488953-20-xxxx

Regulation (EC) No. 2019/1148 - on the marketing and use of explosives precursors

Not applicable

Substances in Candidate List (Art. 59 REACH)

On the basis of available data, the product does not contain any SVHC in percentage ≥ than 0,1%.

Substances subject to authorisation (Annex XIV REACH)

None

Substances subject to exportation reporting pursuant to (EC) Reg. 649/2012:

None

Substances subject to the Rotterdam Convention:

None

Substances subject to the Stockholm Convention:

None

Healthcare controls

Workers exposed to this chemical agent must not undergo health checks, provided that available risk-assessment data prove that the risks related to the workers' health and safety are modest and that the 98/24/EC directive is respected.

15.2. Chemical safety assessment

A chemical safety assessment has not been performed for the preparation/for the substances indicated in section 3.

SECTION 16. Other information

Text of hazard (H) indications mentioned in section 2-3 of the sheet:

Flam. Liq. 2	Flammable liquid, category 2
Flam. Liq. 3	Flammable liquid, category 3
Acute Tox. 3	Acute toxicity, category 3
STOT SE 1	Specific target organ toxicity - single exposure, category 1
Acute Tox. 4	Acute toxicity, category 4
Eye Dam. 1	Serious eye damage, category 1
Eye Irrit. 2	Eye irritation, category 2
Skin Irrit. 2	Skin irritation, category 2
STOT SE 3	Specific target organ toxicity - single exposure, category 3
Skin Sens. 1A	Skin sensitization, category 1A
Aquatic Chronic 2	Hazardous to the aquatic environment, chronic toxicity, category 2
Aquatic Chronic 3	Hazardous to the aquatic environment, chronic toxicity, category 3
H225	Highly flammable liquid and vapour.
H226	Flammable liquid and vapour.
H301	Toxic if swallowed.
H311	Toxic in contact with skin.
H331	Toxic if inhaled.
H370	Causes damage to organs.
H302	Harmful if swallowed.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H315	Causes skin irritation.
H335	May cause respiratory irritation.
H317	May cause an allergic skin reaction.
H336	May cause drowsiness or dizziness.

H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.

LEGEND:
- ADR: European Agreement concerning the carriage of Dangerous goods by Road
- CAS NUMBER: Chemical Abstract Service Number
- CE50: Effective concentration (required to induce a 50% effect)
- CE NUMBER: Identifier in ESIS (European archive of existing substances)
- CLP: EC Regulation 1272/2008
- DNEL: Derived No Effect Level
- EmS: Emergency Schedule
- GHS: Globally Harmonized System of classification and labeling of chemicals
- IATA DGR: International Air Transport Association Dangerous Goods Regulation
- IC50: Immobilization Concentration 50%
- IMDG: International Maritime Code for dangerous goods
- IMO: International Maritime Organization
- INDEX NUMBER: Identifier in Annex VI of CLP
- LC50: Lethal Concentration 50%
- LD50: Lethal dose 50%
- OEL: Occupational Exposure Level
- PBT: Persistent bioaccumulative and toxic as REACH Regulation
- PEC: Predicted environmental Concentration
- PEL: Predicted exposure level
- PNEC: Predicted no effect concentration
- REACH: EC Regulation 1907/2006
- RID: Regulation concerning the international transport of dangerous goods by train
- TLV: Threshold Limit Value
- TLV CEILING: Concentration that should not be exceeded during any time of occupational exposure.
- TWA STEL: Short-term exposure limit
- TWA: Time-weighted average exposure limit
- VOC: Volatile organic Compounds
- vPvB: Very Persistent and very Bioaccumulative as for REACH Regulation
- WGK: Water hazard classes (German).

GENERAL BIBLIOGRAPHY
1. Regulation (EC) 1907/2006 (REACH) of the European Parliament
2. Regulation (EC) 1272/2008 (CLP) of the European Parliament
3. Regulation (EU) 790/2009 (I Atp. CLP) of the European Parliament
4. Regulation (EU) 2015/830 of the European Parliament
5. Regulation (EU) 286/2011 (II Atp. CLP) of the European Parliament
6. Regulation (EU) 618/2012 (III Atp. CLP) of the European Parliament
7. Regulation (EU) 487/2013 (IV Atp. CLP) of the European Parliament
8. Regulation (EU) 944/2013 (V Atp. CLP) of the European Parliament
9. Regulation (EU) 605/2014 (VI Atp. CLP) of the European Parliament
10. Regulation (EU) 2015/1221 (VII Atp. CLP) of the European Parliament
11. Regulation (EU) 2016/918 (VIII Atp. CLP) of the European Parliament
12. Regulation (EU) 2016/1179 (IX Atp. CLP)
13. Regulation (EU) 2017/776 (X Atp. CLP)
14. Regulation (EU) 2018/669 (XI Atp. CLP)
15. Regulation (EU) 2018/1480 (XIII Atp. CLP)
16. Regulation (EU) 2019/521 (XII Atp. CLP)
17. Regulation (EU) 2019/1148
18. Regulation (EU) 2020/217 (XIV Atp. CLP)
- The Merck Index. - 10th Edition
- Handling Chemical Safety
- INRS - Fiche Toxicologique (toxicological sheet)
- Patty - Industrial Hygiene and Toxicology
- N.I. Sax - Dangerous properties of Industrial Materials-7, 1989 Edition
- IFA GESTIS website
- ECHA website
- Database of SDS models for chemicals - Ministry of Health and ISS (Istituto Superiore di Sanità) - Italy
Note for users:

The information contained in the present sheet are based on our own knowledge on the date of the last version. Users must verify the suitability and thoroughness of provided information according to each specific use of the product.
This document must not be regarded as a guarantee on any specific product property.
The use of this product is not subject to our direct control; therefore, users must, under their own responsibility, comply with the current health and safety laws and regulations. The producer is relieved from any liability arising from improper uses.
Provide appointed staff with adequate training on how to use chemical products.
CALCULATION METHODS FOR CLASSIFICATION
Chemical and physical hazards: Product classification derives from criteria established by the CLP Regulation, Annex I, Part 2. The data for evaluation of chemical-physical properties are reported in section 9.
Health hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 3, unless determined otherwise in Section 11.
Environmental hazards: Product classification is based on calculation methods as per Annex I of CLP, Part 4, unless determined otherwise in Section 12.

Changes to previous review:
The following sections were modified:
01 / 02 / 03 / 08 / 09 / 11 / 12 / 15.