

**ORALITE® 5019-020 UV-Ink**

Print date: 03.06.2016

Product code: 359000220

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**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1. Product identifier**

ORALITE® 5019-020 UV-Ink

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

Colour

**1.3. Details of the supplier of the safety data sheet**

Company name:	ORAFOL Europe GmbH	
	Germany	
Street:	Orafolstraße 2	
Place:	D Oranienburg	
Telephone:	+ 49 3301 864 0	Telefax: + 49 3301 864 100
e-mail:	msds@orafol.de	
Internet:	www.orafol.com	

**1.4. Emergency telephone number:**

National Poison Information Service: In case of a medical emergency following exposure to a chemical, the public should call NHS Direct in England or Wales 0845 46 47 or NHS 24 in Scotland 08454 24 24 24 (UK only).

**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

Hazard categories:

Skin corrosion/irritation: Skin Irrit. 2

Serious eye damage/eye irritation: Eye Irrit. 2

Respiratory or skin sensitisation: Skin Sens. 1A

Reproductive toxicity: Repr. 2

Specific target organ toxicity - repeated exposure: STOT RE 1

Hazardous to the aquatic environment: Aquatic Chronic 2

Hazard Statements:

Causes skin irritation.

May cause an allergic skin reaction.

Causes serious eye irritation.

Suspected of damaging fertility.

Causes damage to organs through prolonged or repeated exposure.

Toxic to aquatic life with long lasting effects.

**2.2. Label elements****Regulation (EC) No. 1272/2008****Hazard components for labelling**

(5-ethyl-1,3-dioxan-5-yl)methyl acrylate

N-Vinylcaprolactam

Isobornyl acrylate

2-Phenoxyethyl acrylate

Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide

phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide

2,2-bis(acryloyloxymethyl)butyl acrylate, trimethylolpropane triacrylate

Glycerol propoxy triacrylate

**Signal word:** Danger

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**Pictograms:**



**Hazard statements**

H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H319	Causes serious eye irritation.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H411	Toxic to aquatic life with long lasting effects.

**Precautionary statements**

P260	Do not breathe dust/fume/gas/mist/vapours/spray.
P273	Avoid release to the environment.
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water.
P362+P364	Take off contaminated clothing and wash it before reuse.

**2.3. Other hazards**

No information available.

**SECTION 3: Composition/information on ingredients**

**3.2. Mixtures**

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**Hazardous components**

CAS No	Chemical name			Quantity
	EC No	Index No	REACH No	
	Classification according to Regulation (EC) No. 1272/2008 [CLP]			
66492-51-1	(5-ethyl-1,3-dioxan-5-yl)methyl acrylate			25 < 50 %
	266-380-7			
	Skin Irrit. 2, Skin Sens. 1B, Aquatic Chronic 2; H315 H317 H411			
2235-00-9	N-Vinylcaprolactam			10 < 20 %
	218-787-6		01-2119977109-27	
	Acute Tox. 4, Acute Tox. 4, Eye Irrit. 2A, Skin Sens. 1B, STOT RE 1; H302 H312 H319 H317 H372			
5888-33-5	Isobornyl acrylate			10 < 20 %
	227-561-6		01-2119957862-25	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1B, STOT SE 3, Aquatic Acute 1, Aquatic Chronic 2; H315 H319 H317 H335 H400 H411			
48145-04-6	2-Phenoxyethyl acrylate			10 < 20 %
	256-360-6		01-2119980532-35	
	Skin Sens. 1A, Aquatic Chronic 2; H317 H411			
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			2,5 < 5 %
	278-355-8	015-203-00-X	01-2119972295-29	
	Repr. 2, Aquatic Chronic 2; H361f H411			
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			2,5 < 5 %
	423-340-5	015-189-00-5		
	Skin Sens. 1, Aquatic Chronic 4; H317 H413			
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate, trimethylolpropane triacrylate			1 < 2,5 %
	239-701-3	607-111-00-9	01-2119489896-11	
	Skin Irrit. 2, Eye Irrit. 2, Skin Sens. 1, Aquatic Chronic 3; H315 H319 H317 H412			
	Epoxy acrylate oligomer			1 < 2,5 %
	Skin Irrit. 2, Eye Irrit. 2; H315 H319			
52408-84-1	Glycerol propoxy triacrylate			1 < 2,5 %
	500-114-5		01-2119487948-12	
	Eye Irrit. 2, Skin Sens. 1; H319 H317			
	Stabiliser 1			0,1 < 0,25 %
	Aquatic Acute 1, Aquatic Chronic 1; H400 H410			

Full text of H and EUH statements: see section 16.

**SECTION 4: First aid measures**
**4.1. Description of first aid measures**
**General information**

Remove contaminated, saturated clothing immediately. When in doubt or if symptoms are observed, get medical advice.

**After inhalation**

Remove casualty to fresh air and keep warm and at rest. In case of respiratory tract irritation, consult a

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physician.

**After contact with skin**

After contact with skin, wash immediately with polyethylene glycol, followed by plenty of water. Take off immediately all contaminated clothing and wash it before reuse.

**After contact with eyes**

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

**After ingestion**

Rinse mouth immediately and drink plenty of water. Do NOT induce vomiting.

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

No information available.

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

Treat symptomatically.

**SECTION 5: Firefighting measures****5.1. Extinguishing media****Suitable extinguishing media**

Carbon dioxide (CO<sub>2</sub>), Dry extinguishing powder, Foam, Water spray jet.

**Unsuitable extinguishing media**

High power water jet.

**5.2. Special hazards arising from the substance or mixture**

Vapours can form explosive mixtures with air. Hazardous combustion products: Nitrogen oxides (NO<sub>x</sub>), Carbon dioxide (CO<sub>2</sub>), Carbon monoxide.

**5.3. Advice for firefighters**

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

**Additional information**

Use water spray jet to protect personnel and to cool endangered containers. Suppress gases/vapours/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

**SECTION 6: Accidental release measures****6.1. Personal precautions, protective equipment and emergency procedures**

Provide adequate ventilation. Do not breathe gas/fumes/vapour/spray. Avoid contact with skin, eyes and clothes. Use personal protection equipment.

**6.2. Environmental precautions**

Do not allow to enter into surface water or drains.

**6.3. Methods and material for containment and cleaning up**

Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Treat the recovered material as prescribed in the section on waste disposal.

**6.4. Reference to other sections**

Safe handling: see section 7

Personal protection equipment: see section 8

Disposal: see section 13

**SECTION 7: Handling and storage****7.1. Precautions for safe handling****Advice on safe handling**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

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**Advice on protection against fire and explosion**

No special fire protection measures are necessary.

**7.2. Conditions for safe storage, including any incompatibilities**

**Requirements for storage rooms and vessels**

Keep container tightly closed. Keep locked up. Store in a place accessible by authorized persons only. Provide adequate ventilation as well as local exhaust at critical locations.

**Advice on storage compatibility**

Keep away from: Oxidising agent, Strong alkali, Strong acid .

**Further information on storage conditions**

Protect against: UV-radiation/sunlight. storage temperature: 5 - 35 °C

**7.3. Specific end use(s)**

Colour

**SECTION 8: Exposure controls/personal protection**

**8.1. Control parameters**

**8.2. Exposure controls**



**Appropriate engineering controls**

If handled uncovered, arrangements with local exhaust ventilation have to be used. Do not breathe gas/fumes/vapour/spray.

**Protective and hygiene measures**

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme.

Wash hands and face before breaks and after work and take a shower if necessary . When using do not eat or drink.

**Eye/face protection**

Suitable eye protection: goggles.

**Hand protection**

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances. For special purposes, it is recommended to check the resistance to chemicals of the protective gloves mentioned above together with the supplier of these gloves.

**Skin protection**

Wear suitable protective clothing.

**Respiratory protection**

In case of inadequate ventilation wear respiratory protection.

**SECTION 9: Physical and chemical properties**

**9.1. Information on basic physical and chemical properties**

Physical state: liquid

Colour:

pH-Value:

not determined

**Test method**

**Changes in the physical state**

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Melting point: not determined  
 Initial boiling point and boiling range: > 128 °C  
 Flash point: 96 °C

**Flammability**

Solid: not applicable  
 Gas: not applicable

Lower explosion limits: not determined  
 Upper explosion limits: not determined

**Auto-ignition temperature**

Solid: not applicable  
 Gas: not applicable

Decomposition temperature: not determined

**Oxidizing properties**

Not oxidizing.

Vapour pressure: not determined

Density: not determined

Water solubility: insoluble

**Solubility in other solvents**

not determined

Partition coefficient: not determined

Vapour density: not determined

Evaporation rate: not determined

**9.2. Other information**

Solid content: not determined

**SECTION 10: Stability and reactivity**

**10.1. Reactivity**

No hazardous reaction when handled and stored according to provisions.

**10.2. Chemical stability**

The product is stable under storage at normal ambient temperatures.

**10.3. Possibility of hazardous reactions**

No known hazardous reactions.

**10.4. Conditions to avoid**

Protect against: UV-radiation/sunlight.

**10.5. Incompatible materials**

Keep away from: Peroxide, Strong alkali, Strong acid, Metal, base, Radical former .

**10.6. Hazardous decomposition products**

No known hazardous decomposition products.

**SECTION 11: Toxicological information**

**11.1. Information on toxicological effects**

**Acute toxicity**

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

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CAS No	Chemical name			
	Exposure route	Dose	Species	Source
66492-51-1	(5-ethyl-1,3-dioxan-5-yl)methyl acrylate			
	oral	LD50 > 2000 mg/kg	Rat	OECD Guideline 423
	dermal	LD50 > 2000 mg/kg	Rat	
2235-00-9	N-Vinylcaprolactam			
	oral	LD50 1864 mg/kg	Rat	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	OECD Guideline 402
5888-33-5	Isobornyl acrylate			
	oral	LD50 5750 mg/kg	Rat	Standard acute metho
	dermal	LD50 > 3000 mg/kg	Rabbit	pre-guideline
48145-04-6	2-Phenoxyethyl acrylate			
	oral	LD50 5000 mg/kg	Rat	OECD Guideline 401
75980-60-8	Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide			
	oral	LD50 > 5000 mg/kg	Rat	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	OECD Guideline 402
162881-26-7	phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide			
	oral	LD50 > 2000 mg/kg	Rat	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rat	OECD Guideline 402
15625-89-5	2,2-bis(acryloyloxymethyl)butyl acrylate, trimethylolpropane triacrylate			
	oral	LD50 3680 mg/kg		ECHA
	dermal	LD50 > 2000 mg/kg		ECHA
52408-84-1	Glycerol propoxy triacrylate			
	oral	LD50 > 2000 mg/kg	Rat	OECD Guideline 401
	dermal	LD50 > 2000 mg/kg	Rabbit	OECD Guideline 402

**Irritation and corrosivity**

Causes skin irritation.

Causes serious eye irritation.

**Sensitising effects**

May cause an allergic skin reaction. ((5-ethyl-1,3-dioxan-5-yl)methyl acrylate), (N-Vinylcaprolactam), (Isobornyl acrylate), (2-Phenoxyethyl acrylate), (phenyl bis(2,4,6-trimethylbenzoyl)-phosphine oxide), (2,2-bis(acryloyloxymethyl)butyl acrylate, trimethylolpropane triacrylate), (Glycerol propoxy triacrylate)

**Carcinogenic/mutagenic/toxic effects for reproduction**

Suspected of damaging fertility. (Diphenyl(2,4,6-trimethylbenzoyl)phosphine oxide)

Germ cell mutagenicity: Based on available data, the classification criteria are not met.

Carcinogenicity: 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**

Causes damage to organs through prolonged or repeated exposure. (N-Vinylcaprolactam)

**Aspiration hazard**

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

**Additional information on tests**

This mixture is classified as hazardous according to regulation (EC) No. 1272/2008 [CLP]. Special hazards arising from the substance or mixture!

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**SECTION 12: Ecological information**
**12.1. Toxicity**

Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

CAS No	Chemical name				
	Aquatic toxicity	Dose	[h]   [d]	Species	Source
66492-51-1	(5-ethyl-1,3-dioxan-5-yl)methyl acrylate				
	Acute fish toxicity	LC50 4 mg/l	96 h	Oncorhynchus mykiss (Rainbow trout)	
	Acute algae toxicity	ErC50 2.028 mg/l	96 h		
	Acute crustacea toxicity	EC50 11,577 mg/l	48 h	Daphnia magna (Big water flea)	

**12.2. Persistence and degradability**

The product has not been tested.

**12.3. Bioaccumulative potential**

The product has not been tested.

**12.4. Mobility in soil**

The product has not been tested.

**12.5. Results of PBT and vPvB assessment**

The product has not been tested.

**12.6. Other adverse effects**

No information available.

**Further information**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil.

**SECTION 13: Disposal considerations**
**13.1. Waste treatment methods**
**Advice on disposal**

Do not allow to enter into surface water or drains. Do not allow to enter into soil/subsoil. Dispose of waste according to applicable legislation.

**Contaminated packaging**

This material and its container must be disposed of as hazardous waste. Handle contaminated packages in the same way as the substance itself.

**SECTION 14: Transport information**
**Land transport (ADR/RID)**
**14.1. UN number:**

UN 3082

**14.2. UN proper shipping name:**

 ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
 ((5-ethyl-1,3-dioxan-5-yl)methyl acrylate, 2-Phenoxyethyl acrylate,  
 Isobornyl acrylate, N-Vinylcaprolactam)

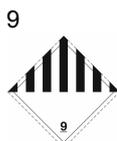
**14.3. Transport hazard class(es):**

9

**14.4. Packing group:**

III

Hazard label:



Classification code:

M6

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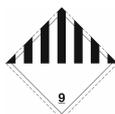
Product code: 359000220

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Special Provisions: 274 335 375 601  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 Transport category: 3  
 Hazard No: 90  
 Tunnel restriction code: E

**Inland waterways transport (ADN)**

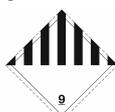
**14.1. UN number:** UN 3082  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
 ((5-ethyl-1,3-dioxan-5-yl)methyl acrylate, 2-Phenoxyethyl acrylate,  
 Isobornyl acrylate, N-Vinylcaprolactam)  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
 Hazard label: 9



Classification code: M6  
 Special Provisions: 274 335 375 601  
 Limited quantity: 5 L  
 Excepted quantity: E1

**Marine transport (IMDG)**

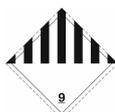
**14.1. UN number:** UN 3082  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
 ((5-ethyl-1,3-dioxan-5-yl)methyl acrylate, 2-Phenoxyethyl acrylate,  
 Isobornyl acrylate, N-Vinylcaprolactam)  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
 Hazard label: 9



Special Provisions: 274, 335, 969  
 Limited quantity: 5 L  
 Excepted quantity: E1  
 EmS: F-A, S-F

**Air transport (ICAO)**

**14.1. UN number:** UN 3082  
**14.2. UN proper shipping name:** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S.  
 ((5-ethyl-1,3-dioxan-5-yl)methyl acrylate, 2-Phenoxyethyl acrylate,  
 Isobornyl acrylate, N-Vinylcaprolactam)  
**14.3. Transport hazard class(es):** 9  
**14.4. Packing group:** III  
 Hazard label: 9



Special Provisions: A97 A158 A197  
 Limited quantity Passenger: 30 kg G

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Passenger LQ:	Y964	
Excepted quantity:	E1	
IATA-packing instructions - Passenger:		964
IATA-max. quantity - Passenger:		450 L
IATA-packing instructions - Cargo:		964
IATA-max. quantity - Cargo:		450 L

**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: no

**14.6. Special precautions for user**

No information available.

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

not applicable

**SECTION 15: Regulatory information**

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

**EU regulatory information**

2004/42/EC (VOC): 20 %

**National regulatory information**

Employment restrictions: Observe restrictions to employment for juvenils according to the 'juvenile work protection guideline' (94/33/EC). Observe employment restrictions under the Maternity Protection Directive (92/85/EEC) for expectant or nursing mothers.

Water contaminating class (D): 2 - water contaminating  
Skin resorption/Sensitization: Causes allergic hypersensitivity reactions.

**Additional information**

This mixture contains the following substances of very high concern (SVHC) which are included in the Candidate List according to Article 59 of REACH:none  
This mixture contains the following substances of very high concern (SVHC) which are subject to authorisation according to Annex XIV of REACH: none

**15.2. Chemical safety assessment**

Chemical safety assessments for substances in this mixture were not carried out.

**SECTION 16: Other information**

**Abbreviations and acronyms**

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)  
IMDG: International Maritime Code for Dangerous Goods  
IATA: International Air Transport Association  
GHS: Globally Harmonized 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  
LC50: Lethal concentration, 50%  
LD50: Lethal dose, 50%

**Relevant H and EUH statements (number and full text)**

H302 Harmful if swallowed.  
H312 Harmful in contact with skin.  
H315 Causes skin irritation.  
H317 May cause an allergic skin reaction.

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H319	Causes serious eye irritation.
H335	May cause respiratory irritation.
H361f	Suspected of damaging fertility.
H372	Causes damage to organs through prolonged or repeated exposure.
H400	Very toxic to aquatic life.
H410	Very toxic to aquatic life with long lasting effects.
H411	Toxic to aquatic life with long lasting effects.
H412	Harmful to aquatic life with long lasting effects.
H413	May cause long lasting harmful effects to aquatic life.

**Further Information**

The above information describes exclusively the safety requirements of the product and is based on our present-day knowledge. The information is intended to give you advice about the safe handling of the product named in this safety data sheet, for storage, processing, transport and disposal. The information cannot be transferred to other products. In the case of mixing the product with other products or in the case of processing, the information on this safety data sheet is not necessarily valid for the new made-up material.

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*(The data for the hazardous ingredients were taken respectively from the last version of the sub-contractor's safety data sheet.)*