

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

1.1. Product identifier

Product form : Mixture
Product name : Organometallic dye for industrial use
Product code : GPP 1261 H

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

1.2.1. Relevant identified uses

Main use category : Industrial use
Use of the substance/mixture : Dyestuff/pigment

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

Heraeus Tokmak A.S.
Kemalpaşa O.S.B. Mah. 37. Sok. No: 6
35170 Ulucak Kemalpaşa
Izmir - TURKEY
T +90 (232) 877 2410
hakan.kiran@heraeus.com - www.heraeustokmak.com

1.4. Emergency telephone number

Emergency number : +90 (232) 877 2410

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Flammable liquids, Category 3	H226
Skin corrosion/irritation, Category 2	H315
Serious eye damage/eye irritation, Category 1	H318
Skin sensitisation, Category 1	H317
Hazardous to the aquatic environment — Acute Hazard, Category 1	H400
Hazardous to the aquatic environment — Chronic Hazard, Category 1	H410

Full text of H-statements: see section 16

Adverse physicochemical, human health and environmental effects

Flammable liquid and vapour. Causes skin irritation. May cause an allergic skin reaction. Causes serious eye damage. Very toxic to aquatic life with long lasting effects.

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS02

GHS05

GHS07

GHS09

Signal word (CLP) :

Danger

Contains :

acetic acid 100%; Lavandin oil; Oils, eucalyptus; Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines; Oils, pine; Oils, spike; Rosemary oil; Naphthenic acid

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Hazard statements (CLP)	: H226 - Flammable liquid and vapour. H315 - Causes skin irritation. H317 - May cause an allergic skin reaction. H318 - Causes serious eye damage. H410 - Very toxic to aquatic life with long lasting effects.
Precautionary statements (CLP)	: P210 - Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P261 - Avoid breathing vapours, spray, mist, gas. P273 - Avoid release to the environment. P280 - Wear protective gloves, protective clothing, eye protection, face protection. P303+P361+P353 - IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water . P305+P351+P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. P308+P313 - IF exposed or concerned: Get medical advice/attention. P501 - Dispose of contents and container to a hazardous or special waste collection point.

2.3. Other hazards

No additional information available

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
Oils, spike	CAS-No.: 8016-78-2 EC-No.: 616-988-7	≥ 25 – < 50	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines	CAS-No.: 68410-23-1 EC-No.: 614-452-7	≥ 5 – < 10	Skin Irrit. 2, H315 Eye Dam. 1, H318 Skin Sens. 1A, H317 Aquatic Chronic 2, H411
Rosemary oil	CAS-No.: 8000-25-7 EC-No.: 616-767-5	≥ 5 – < 10	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1B, H317 Asp. Tox. 1, H304 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
cyclohexanone	CAS-No.: 108-94-1 EC-No.: 203-631-1 EC Index-No.: 606-010-00-7	≥ 5 – < 10	Flam. Liq. 3, H226 Acute Tox. 4 (Inhalation), H332
Oils, eucalyptus	CAS-No.: 8000-48-4 EC-No.: 296-357-7	≥ 1 – < 3	Flam. Liq. 3, H226 Skin Irrit. 2, H315 Skin Sens. 1, H317 Repr. 2, H361 Asp. Tox. 1, H304 Aquatic Chronic 2, H411

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Name	Product identifier	Conc. (% w/w)	Classification according to Regulation (EC) No. 1272/2008 [CLP]
acetic acid 100% (Note B)	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6	≥ 1 – < 3	Flam. Liq. 3, H226 Skin Corr. 1A, H314
Naphthenic acid	CAS-No.: 1338-24-5 EC-No.: 215-662-8	≥ 0.1 – < 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317
Oils, pine	CAS-No.: 8002-09-3 EC-No.: 692-006-0	≥ 0.1 – < 1	Skin Irrit. 2, H315 Eye Irrit. 2, H319 Skin Sens. 1, H317 Asp. Tox. 1, H304 Aquatic Chronic 2, H411
Naphthenic acids, vanadyl complexes	CAS-No.: 68553-60-6 EC-No.: 271-395-7	≥ 0.1 – < 1	Not classified
Octanoic acid, copper salt	CAS-No.: 20543-04-8 EC-No.: 243-866-7	≥ 0.1 – < 1	Acute Tox. 4 (Oral), H302 Aquatic Acute 1, H400 Aquatic Chronic 1, H410
Lavandin oil	CAS-No.: 91722-69-9 EC-No.: 294-470-6	≥ 0.1 – < 1	Asp. Tox. 1, H304 Eye Irrit. 2, H319 Aquatic Chronic 3, H412 Skin Sens. 1B, H317
Bismuth tris(2-ethylhexanoate)	CAS-No.: 67874-71-9 EC-No.: 267-499-7	≥ 0.01 – < 0.1	Skin Irrit. 2, H315 Eye Dam. 1, H318 Repr. 2, H361d
2-ethylhexanoic acid	CAS-No.: 149-57-5 EC-No.: 205-743-6 EC Index-No.: 607-230-00-6	≥ 0.01 – < 0.1	Repr. 2, H361d

Specific concentration limits		
Name	Product identifier	Specific concentration limits
acetic acid 100%	CAS-No.: 64-19-7 EC-No.: 200-580-7 EC Index-No.: 607-002-00-6	(10 ≤C < 25) Eye Irrit. 2, H319 (10 ≤C < 25) Skin Irrit. 2, H315 (25 ≤C < 90) Skin Corr. 1B, H314 (90 ≤C < 100) Skin Corr. 1A, H314

Note B : Some substances (acids, bases, etc.) are placed on the market in aqueous solutions at various concentrations and, therefore, these solutions require different classification and labelling since the hazards vary at different concentrations. In Part 3 entries with Note B have a general designation of the following type: "nitric acid ... %".

In this case the supplier must state the percentage concentration of the solution on the label. Unless otherwise stated, it is assumed that the percentage concentration is calculated on a ght/weight basis.

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

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general

: Never give anything by mouth to an unconscious person. People with over sensibility problems are not allowed to work or be exposed to the product. In all cases of doubt, or when symptoms persist, seek medical attention.

First-aid measures after inhalation

: Remove person to fresh air and keep comfortable for breathing.

First-aid measures after skin contact

: Rinse skin with water/shower. Take off immediately all contaminated clothing. If skin irritation or rash occurs: Get medical advice/attention.

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

First-aid measures after eye contact	: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Call a physician immediately.
First-aid measures after ingestion	: Call a poison center or a doctor if you feel unwell.

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

Symptoms/effects after skin contact	: Irritation. May cause an allergic skin reaction.
Symptoms/effects after eye contact	: Serious damage to eyes.

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	: Water spray. Dry chemical powder, alcohol-resistant foam, carbon dioxide (CO ₂).
Unsuitable extinguishing media	: Strong water jet.

5.2. Special hazards arising from the substance or mixture

Fire hazard	: Flammable liquid and vapour. Keep away from ignition sources (including static discharges). Contact with combustible material may cause fire.
Explosion hazard	: Heat may build pressure, rupturing closed containers, spreading fire and increasing risk of burns and injuries.
Reactivity in case of fire	: At high temperature may liberate dangerous gases.
Hazardous decomposition products in case of fire	: Toxic fumes may be released.

5.3. Advice for firefighters

Precautionary measures fire	: Approach from upwind. Use water spray or fog for cooling exposed containers. Keep away from combustible materials.
Firefighting instructions	: Use water spray or fog for cooling exposed containers. Cool adjacent tanks / containers / drums with water jet. Do not allow water to enter the vessels, a violent reaction may occur. Do not enter fire area without proper protective equipment, including respiratory protection. Exercise caution when fighting any chemical fire. Keep upwind. In case of fire: Evacuate area. Fight fire remotely due to the risk of explosion.
Protection during firefighting	: Do not attempt to take action without suitable protective equipment. Self-contained breathing apparatus. Complete protective clothing.
Other information	: High temperature decomposition products are harmful by inhalation. Inhalation of vapour can cause breathing difficulties.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment	: Wear recommended personal protective equipment.
Emergency procedures	: Ventilate spillage area. No open flames, no sparks, and no smoking. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Do not touch or walk on the spilled product. Evacuate unnecessary personnel. Mark out the contaminated area with signs and prevent access to unauthorized personnel.

6.1.2. For emergency responders

Protective equipment	: Do not attempt to take action without suitable protective equipment. For further information refer to section 8: "Exposure controls/personal protection". Only qualified personnel equipped with suitable protective equipment may intervene.
Emergency procedures	: Avoid contact with skin and eyes. Do not touch spilled material. Evacuate unnecessary personnel. Keep public away from danger area. Prevent from entering sewers, basements and workpits, or any place where its accumulation can be dangerous. Ventilate area. Stop leak if safe to do so.

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

6.2. Environmental precautions

Avoid release to the environment.

6.3. Methods and material for containment and cleaning up

For containment	: Collect spillage. Comply with the safety instructions.
Methods for cleaning up	: Notify authorities if product enters sewers or public waters. Clean up any spills as soon as possible, using an absorbent material to collect it. Absorb with liquid-binding material (e.g. sand, diatomaceous earth, acid- or universal binding agents). Sweep or shovel spills into appropriate container for disposal. Minimise generation of dust.
Other information	: Dispose of materials or solid residues at an authorized site. Dispose of contaminated materials in accordance with current regulations.

6.4. Reference to other sections

Concerning personal protective equipment to use, see section 8. Concerning disposal elimination after cleaning, see section 13.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Additional hazards when processed	: Use adequate ventilation to keep vapour concentrations below applicable standard. Take all necessary technical measures to avoid or minimize the release of the product on the workplace.
Precautions for safe handling	: Ensure good ventilation of the work station. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground/bond container and receiving equipment. Use only non-sparking tools. Take precautionary measures against static discharge. Flammable vapours may accumulate in the container. Use explosion-proof equipment. Wear personal protective equipment. Avoid contact with skin and eyes. Avoid breathing dust/fume/gas/mist/vapours/spray. Avoid dust formation. Avoid prolonged and repeated contact with skin. Contaminated work clothing should not be allowed out of the workplace. Do not spray on an open flame or other ignition source.
Hygiene measures	: Wash contaminated clothing before reuse. Contaminated work clothing should not be allowed out of the workplace. Do not eat, drink or smoke when using this product. Always wash hands after handling the product.

7.2. Conditions for safe storage, including any incompatibilities

Technical measures	: Ground/bond container and receiving equipment. Ensure adequate ventilation, especially in confined areas. Comply with applicable regulations.
Storage conditions	: Store in a well-ventilated place. Keep cool. Keep container tightly closed.
Incompatible products	: Strong acids. Strong bases. Strong oxidizing agents. Peroxides.
Incompatible materials	: Extremely high or low temperatures.
Heat and ignition sources	: Do not smoke. KEEP SUBSTANCE AWAY FROM: ignition sources. heat sources.
Information on mixed storage	: Keep away from food, drink and animal feeding stuffs.
Storage area	: Avoid: Extremely high or low temperatures. Heat and ignition sources.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

8.1.1. National occupational exposure and biological limit values

No additional information available

8.1.2. Recommended monitoring procedures

No additional information available

8.1.3. Air contaminants formed

No additional information available

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

8.1.4. DNEL and PNEC

No additional information available

8.1.5. Control banding

No additional information available

8.2. Exposure controls

8.2.1. Appropriate engineering controls

Appropriate engineering controls:

Ensure good ventilation of the work station. Avoid contact with skin, eyes and clothing.

8.2.2. Personal protection equipment

Personal protective equipment:

Gloves. Safety glasses.

Personal protective equipment symbol(s):



8.2.2.1. Eye and face protection

Eye protection:

Safety glasses. EN 166

8.2.2.2. Skin protection

Skin and body protection:

Wear suitable protective clothing

Hand protection:

Protective gloves. EN 374. Choosing the proper glove is a decision that depends not only on the type of material, but also on other quality features, which differ for each manufacturer. Gloves must be replaced after each use and whenever signs of wear or perforation appear

8.2.2.3. Respiratory protection

Respiratory protection:

In case of insufficient ventilation, wear suitable respiratory equipment

8.2.2.4. Thermal hazards

No additional information available

8.2.3. Environmental exposure controls

Environmental exposure controls:

Avoid release to the environment.

Consumer exposure controls:

Do not eat, drink or smoke during use. Always wash hands after handling the product. Avoid contact with skin and eyes. Avoid contact during pregnancy/while nursing.

Other information:

Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	: Liquid
Appearance	: gel.
Colour	: brown.
Odour	: characteristic.
Odour threshold	: No data available
pH	: No data available
Relative evaporation rate (butylacetate=1)	: No data available
Melting point	: Not applicable

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Freezing point	: No data available
Boiling point	: > 35 °C (1.013 hPa)
Flash point	: 49 °C (1.013 hPa)
Auto-ignition temperature	: No data available
Decomposition temperature	: No data available
Flammability (solid, gas)	: Not applicable
Vapour pressure	: No data available
Relative vapour density at 20 °C	: No data available
Relative density	: No data available
Solubility	: practically insoluble.
Partition coefficient n-octanol/water (Log Pow)	: No data available
Viscosity, kinematic	: No data available
Viscosity, dynamic	: 1000 mPa·s (23 °C)
Explosive properties	: No data available
Oxidising properties	: No data available
Explosive limits	: No data available

9.2. Other information

No additional information available

SECTION 10: Stability and reactivity

10.1. Reactivity

Flammable liquid and vapour.

10.2. Chemical stability

Stable under normal conditions.

10.3. Possibility of hazardous reactions

No dangerous reactions known under normal conditions of use.

10.4. Conditions to avoid

Avoid contact with hot surfaces. Heat. No flames, no sparks. Eliminate all sources of ignition.

10.5. Incompatible materials

Strong acids. Strong bases. Strong oxidizing agents. Peroxides. Explosives.

10.6. Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity (oral)	: Not classified
Acute toxicity (dermal)	: Not classified
Acute toxicity (inhalation)	: Not classified

cyclohexanone (108-94-1)

LD50 oral	1890 mg/kg bodyweight
LD50 dermal	1100 mg/kg bodyweight
LC50 Inhalation - Rat	> 6.2 mg/l air Animal: rat
LC50 Inhalation - Rat (Vapours)	11 mg/l/4h

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

acetic acid 100% (64-19-7)	
LD50 oral rat	3310 mg/kg Delaware State Medical Journal. Vol. 31, Pg. 276, 1959.
LD50 oral	4960 mg/kg bodyweight Animal: mouse
LD50 dermal	1100 mg/kg bodyweight

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (68410-23-1)	
LD50 oral rat	> 2000 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 423 (Acute Oral toxicity - Acute Toxic Class Method), Guideline: EU Method B.1 tris (Acute Oral Toxicity - Acute Toxic Class Method)
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity), Guideline: EU Method B.3 (Acute Toxicity (Dermal))

2-ethylhexanoic acid (149-57-5)	
LD50 oral rat	2043 mg/kg bodyweight Animal: rat, Animal sex: female, Guideline: OECD Guideline 401 (Acute Oral Toxicity), 95% CL: 1445 - 2890
LD50 dermal rat	> 2000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 402 (Acute Dermal Toxicity)

Oils, eucalyptus (8000-48-4)	
LD50 oral	2569 mg/kg bodyweight

Skin corrosion/irritation	: Causes skin irritation.
Serious eye damage/irritation	: Causes serious eye damage.
Respiratory or skin sensitisation	: May cause an allergic skin reaction.
Germ cell mutagenicity	: Not classified
Carcinogenicity	: Not classified
Reproductive toxicity	: Not classified
STOT-single exposure	: Not classified
STOT-repeated exposure	: Not classified

cyclohexanone (108-94-1)	
NOAEL (oral, rat, 90 days)	143 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 408 (Repeated Dose 90-Day Oral Toxicity in Rodents)

acetic acid 100% (64-19-7)	
NOAEL (oral, rat, 90 days)	290 mg/kg bodyweight Animal: rat, Animal sex: male

Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (68410-23-1)	
NOAEL (oral, rat, 90 days)	1000 mg/kg bodyweight Animal: rat, Guideline: OECD Guideline 422 (Combined Repeated Dose Toxicity Study with the Reproduction / Developmental Toxicity Screening Test)

2-ethylhexanoic acid (149-57-5)	
NOAEL (oral, rat, 90 days)	≈ 300 mg/kg bodyweight Animal: rat, Guideline: EPA OTS 795.2600 (Subchronic Oral Toxicity Test)

Aspiration hazard	: Not classified
-------------------	------------------

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general	: Very toxic to aquatic life with long lasting effects.
Hazardous to the aquatic environment, short-term (acute)	: Very toxic to aquatic life.
Hazardous to the aquatic environment, long-term (chronic)	: Very toxic to aquatic life with long lasting effects.

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Not rapidly degradable

cyclohexanone (108-94-1)	
LC50 - Fish [1]	527 – 732 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	> 100 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	> 100 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
acetic acid 100% (64-19-7)	
LC50 - Fish [1]	79 – 273 mg/l Mattson, V.R., J.W. Arthur, and C.T. Walbridge 1976. Acute Toxicity of Selected Organic Compounds to Fathead Minnows. EPA-600/3-76-097, U.S.EPA, Duluth, MN :12 p.
LC50 - Fish [2]	> 300.82 mg/l Test organisms (species): Oncorhynchus mykiss (previous name: Salmo gairdneri)
EC50 - Crustacea [1]	52.6 – 180 mg/l Espiritu, E.Q., C.R. Janssen, and G. Persoone 1995. Cyst-Based Toxicity Tests. VII. Evaluation of the 1-h Enzymatic Inhibition Test (Fluotox) with Artemia nauplii. Environ.Toxicol.Water Qual. 10:25-34
EC50 - Crustacea [2]	65 mg/l Janssen, C.R., E.Q. Espiritu, and G. Persoone 1993. Evaluation of the new ""Enzymatic Inhibition"" Criterion for Rapid Toxicity Testing with Daphnia magna. In: A.Soaes and P.Calow (Eds.), Progress in Standardization of Aquatic Toxicity Tests, Lewis Publ. :71-81
EC50 72h - Algae [1]	> 1000 mg/l Test organisms (species): Skeletonema costatum
EC50 72h - Algae [2]	> 300.82 mg/l Test organisms (species): Skeletonema costatum
Fatty acids, C18-unsatd., dimers, reaction products with polyethylenepolyamines (68410-23-1)	
LC50 - Fish [1]	7.07 mg/l Test organisms (species): Danio rerio (previous name: Brachydanio rerio)
EC50 - Crustacea [1]	5.18 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	4.11 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
Naphthenic acid (1338-24-5)	
LC50 - Fish [1]	≈ 5.62 mg/l Test organisms (species): Pimephales promelas
EC50 - Crustacea [1]	≈ 20 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	≈ 29.6 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 72h - Algae [2]	≈ 17.7 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [1]	≈ 29.9 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
EC50 96h - Algae [2]	≈ 18.1 mg/l Test organisms (species): Pseudokirchneriella subcapitata (previous names: Raphidocelis subcapitata, Selenastrum capricornutum)
2-ethylhexanoic acid (149-57-5)	
LC50 - Fish [1]	> 100 mg/l Test organisms (species): Oryzias latipes
EC50 - Crustacea [1]	910 mg/l Test organisms (species): Daphnia magna
EC50 72h - Algae [1]	49.3 mg/l Test organisms (species): Desmodesmus subspicatus (previous name: Scenedesmus subspicatus)
LOEC (chronic)	63 mg/l Test organisms (species): Daphnia magna Duration: '21 d'
NOEC (chronic)	25 mg/l Test organisms (species): Daphnia magna Duration: '21 d'

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

12.2. Persistence and degradability

No additional information available

12.3. Bioaccumulative potential

acetic acid 100% (64-19-7)

Partition coefficient n-octanol/water (Log Kow)	-0.17 LOG KOW Databank, compiled by Dr. James Sangster, Sangster Research Laboratories, Montreal, Canada, distributed by Technical Database Services (TDS), New York
---	--

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

No additional information available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste treatment methods	: Dispose of contents/container in accordance with licensed collector's sorting instructions.
Sewage disposal recommendations	: Disposal must be done according to official regulations.
Product/Packaging disposal recommendations	: Completely empty the packaging prior to decontamination. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation. Comply with applicable regulations for solid waste disposal.
Additional information	: Flammable vapours may accumulate in the container. Empty containers should be taken for recycling, recovery or waste in accordance with local regulation.
Ecology - waste materials	: Avoid release to the environment. Do not allow into drains or water courses.

SECTION 14: Transport information

In accordance with ADR / IMDG / IATA / ADN / RID

ADR	IMDG	IATA	ADN	RID
14.1. UN number				
UN 1263	UN 1263	UN 1263	UN 1263	UN 1263
14.2. UN proper shipping name				
PAINT / PAINT RELATED MATERIAL	PAINT	Paint	PAINT	PAINT
Transport document description				
UN 1263 PAINT / PAINT RELATED MATERIAL, 3, III, (D/E), ENVIRONMENTALLY HAZARDOUS	UN 1263 PAINT, 3, III, MARINE POLLUTANT/ENVIRONMENTALLY HAZARDOUS	UN 1263 Paint, 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1263 PAINT, 3, III, ENVIRONMENTALLY HAZARDOUS	UN 1263 PAINT, 3, III, ENVIRONMENTALLY HAZARDOUS
14.3. Transport hazard class(es)				
3	3	3	3	3

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

ADR	IMDG	IATA	ADN	RID
14.4. Packing group				
III	III	III	III	III
14.5. Environmental hazards				
Dangerous for the environment: Yes	Dangerous for the environment: Yes Marine pollutant: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes	Dangerous for the environment: Yes
No supplementary information available				

14.6. Special precautions for user

Overland transport

Classification code (ADR)	: F1
Special provisions (ADR)	: 163, 367, 650
Limited quantities (ADR)	: 5I
Excepted quantities (ADR)	: E1
Packing instructions (ADR)	: P001, IBC03, LP01, R001
Special packing provisions (ADR)	: PP1
Mixed packing provisions (ADR)	: MP19
Portable tank and bulk container instructions (ADR)	: T2
Portable tank and bulk container special provisions (ADR)	: TP1, TP29
Tank code (ADR)	: LGBF
Vehicle for tank carriage	: FL
Transport category (ADR)	: 3
Special provisions for carriage - Packages (ADR)	: V12
Special provisions for carriage - Operation (ADR)	: S2
Hazard identification number (Kemler No.)	: 30
Orange plates	:

Tunnel restriction code (ADR) : D/E

Transport by sea

Special provisions (IMDG)	: 163, 223, 367, 955
Limited quantities (IMDG)	: 5 L
Excepted quantities (IMDG)	: E1
Packing instructions (IMDG)	: P001, LP01
Special packing provisions (IMDG)	: PP1
IBC packing instructions (IMDG)	: IBC03
Tank instructions (IMDG)	: T2
Tank special provisions (IMDG)	: TP1, TP29
EmS-No. (Fire)	: F-E
EmS-No. (Spillage)	: S-E
Stowage category (IMDG)	: A
Properties and observations (IMDG)	: Miscibility with water depends upon the composition.

Air transport

PCA Excepted quantities (IATA)	: E1
PCA Limited quantities (IATA)	: Y344
PCA limited quantity max net quantity (IATA)	: 10L
PCA packing instructions (IATA)	: 355
PCA max net quantity (IATA)	: 60L

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

CAO packing instructions (IATA) : 366
CAO max net quantity (IATA) : 220L
Special provisions (IATA) : A3, A72, A192
ERG code (IATA) : 3L

Inland waterway transport

Classification code (ADN) : F1
Special provisions (ADN) : 163, 367, 650
Limited quantities (ADN) : 5 L
Excepted quantities (ADN) : E1
Equipment required (ADN) : PP, EX, A
Ventilation (ADN) : VE01
Number of blue cones/lights (ADN) : 0

Rail transport

Classification code (RID) : F1
Special provisions (RID) : 163, 367, 650
Limited quantities (RID) : 5L
Excepted quantities (RID) : E1
Packing instructions (RID) : P001, IBC03, LP01, R001
Special packing provisions (RID) : PP1
Mixed packing provisions (RID) : MP19
Portable tank and bulk container instructions (RID) : T2
Portable tank and bulk container special provisions (RID) : TP1, TP29
Tank codes for RID tanks (RID) : LGBF
Transport category (RID) : 3
Special provisions for carriage – Packages (RID) : W12
Colis express (express parcels) (RID) : CE4
Hazard identification number (RID) : 30

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

15.1.1. EU-Regulations

Contains no REACH substances with Annex XVII restrictions

Contains no substance on the REACH candidate list

Contains no REACH Annex XIV substances

Contains no substance subject to Regulation (EU) No 649/2012 of the European Parliament and of the Council of 4 July 2012 concerning the export and import of hazardous chemicals.

Contains no substance subject to Regulation (EU) No 2019/1021 of the European Parliament and of the Council of 20 June 2019 on persistent organic pollutants

15.1.2. National regulations

No additional information available

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Abbreviations and acronyms

COD	Chemical oxygen demand (COD)
ADN	European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Abbreviations and acronyms	
ADR	European Agreement concerning the International Carriage of Dangerous Goods by Road
ATE	Acute Toxicity Estimate
BCF	Bioconcentration factor
BLV	Biological limit value
BOD	Biochemical oxygen demand (BOD)
CAS	Chemical Abstracts Service (division of the American Chemical Society)
CLP	Classification Labelling Packaging Regulation; Regulation (EC) No 1272/2008
DMEL	Derived Minimal Effect level
DNEL	Derived-No Effect Level
EC50	Median effective concentration
EC-No.	European Community number
CAS-No.	Chemical Abstract Service number
EN	European Standard
IARC	International Agency for Research on Cancer
IATA	International Air Transport Association
IMDG	International Maritime Dangerous Goods
IOELV	Indicative Occupational Exposure Limit Value
LC50	Median lethal concentration
LD50	Median lethal dose
LOAEL	Lowest Observed Adverse Effect Level
N.O.S.	Not Otherwise Specified
NOAEC	No-Observed Adverse Effect Concentration
NOAEL	No-Observed Adverse Effect Level
NOEC	No-Observed Effect Concentration
OECD	Organisation for Economic Co-operation and Development
OEL	Occupational Exposure Limit
PBT	Persistent Bioaccumulative Toxic
PNEC	Predicted No-Effect Concentration
Pow (log)	n-octanol/water partition coefficient
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regulation (EC) No 1907/2006
RID	Regulations concerning the International Carriage of Dangerous Goods by Rail
SDS	Safety Data Sheet
STP	Sewage treatment plant
ThOD	Theoretical oxygen demand (ThOD)
TLM	Median Tolerance Limit
TRGS	Technical Rules for Hazardous Substances
VOC	Volatile Organic Compounds
vPvB	Very Persistent and Very Bioaccumulative
WGK	Water Hazard Class

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

Data sources

: Classification according to Regulation (EC) No. 1272/2008 [CLP]. ECHA (European Chemicals Agency). Supplier's safety documents.

Full text of H- and EUH-statements	
Acute Tox. 4 (Inhalation)	Acute toxicity (inhal.), Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Aquatic Acute 1	Hazardous to the aquatic environment — Acute Hazard, Category 1
Aquatic Chronic 1	Hazardous to the aquatic environment — Chronic Hazard, Category 1
Aquatic Chronic 2	Hazardous to the aquatic environment — Chronic Hazard, Category 2
Aquatic Chronic 3	Hazardous to the aquatic environment — Chronic Hazard, Category 3
Asp. Tox. 1	Aspiration hazard, Category 1
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Eye Irrit. 2	Serious eye damage/eye irritation, Category 2
Flam. Liq. 3	Flammable liquids, Category 3
Repr. 2	Reproductive toxicity, Category 2
Repr. 2	Reproductive toxicity, Category 2
Skin Corr. 1A	Skin corrosion/irritation, Category 1, Sub-Category 1A
Skin Corr. 1B	Skin corrosion/irritation, Category 1, Sub-Category 1B
Skin Irrit. 2	Skin corrosion/irritation, Category 2
Skin Sens. 1	Skin sensitisation, Category 1
Skin Sens. 1A	Skin sensitisation, category 1A
Skin Sens. 1B	Skin sensitisation, category 1B
H226	Flammable liquid and vapour.
H302	Harmful if swallowed.
H304	May be fatal if swallowed and enters airways.
H314	Causes severe skin burns and eye damage.
H315	Causes skin irritation.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H319	Causes serious eye irritation.
H332	Harmful if inhaled.
H361	Suspected of damaging fertility or the unborn child.
H361d	Suspected of damaging the unborn child.
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.

Safety Data Sheet (SDS), EU

Organometallic dye for industrial use

Safety Data Sheet

according to Regulation (EC) No. 1907/2006 (REACH) with its amendment Regulation (EU) 2015/830

DISCLAIMER OF LIABILITY The information in this SDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its correctness. The conditions or methods of handling, storage, use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. This SDS was prepared and is to be used only for this product. If the product is used as a component in another product, this SDS information may not be applicable