

Safety Data Sheet

according to Regulation (EC) No 1907/2006

396-DRX+; 396-DRX-M+

Revision date: 05.03.2021

Product code: 950411

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

396-DRX+; 396-DRX-M+

Further trade names

This MSDS covers the following products:

Fluxes 396-DRX+; 396-DRX-M+

Flux 396-DRX+; 396-DRX-M+

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

Fluxes for soft soldering

Uses advised against

Any non-intended use.

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

Company name:	Cobar Europe BV	
Street:	Aluminiumstraat 2	
Place:	4823 AL Breda	
Telephone:	+31 76 5445566	Telefax: +31 76 5445577
e-mail:	info@Cobar.com	

Supplier

Company name:	Balver Zinn Josef Jost GmbH & Co. KG	
Street:	Blintroper Weg 11	
Place:	D-58802 Balve	
Telephone:	+49 2375 915-0	Telefax: +49 2375 915-114
Responsible Department:	cia@BalverZinn.com	

1.4. Emergency telephone number:+49 (0) 700 24 112 112 (Contract-ID:BZW)
from USA/Canada pls call 011 49 700 24 112 112**SECTION 2: Hazards identification****2.1. Classification of the substance or mixture****Regulation (EC) No. 1272/2008**

This mixture is not classified as hazardous in accordance with Regulation (EC) No. 1272/2008.

2.2. Label elements**Regulation (EC) No. 1272/2008****Special labelling of certain mixtures**

EUH208	Contains 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

2.3. Other hazards

No information available.

SECTION 3: Composition/information on ingredients**3.2. Mixtures****Chemical characterization**

in aqueous solution

Hazardous components

CAS No	Chemical name	Quantity
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	EC No	Index No	REACH No	
	GHS Classification			
110-94-1	glutaric acid			1 - 5 %
	203-817-2		01-2120264127-58	
	Skin Corr. 1A; H314			
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol			<1 %
	204-809-1		01-2119954390-39	
	Eye Dam. 1, Skin Sens. 1B, Aquatic Chronic 3; H318 H317 H412			

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

Specific Conc. Limits, M-factors and ATE

CAS No	EC No	Chemical name	Quantity
	Specific Conc. Limits, M-factors and ATE		
126-86-3	204-809-1	2,4,7,9-tetramethyldec-5-yne-4,7-diol	<1 %
	dermal: LD50 = >2000 mg/kg		

Further Information

Product does not contain listed SVHC substances > 0,1 % according to Regulation (EC) No. 1907/2006 Article 59 (REACH)

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

In case of accident or unwellness, seek medical advice immediately (show directions for use or safety data sheet if possible). Change contaminated clothing.

After inhalation

In case of accident by inhalation: remove casualty to fresh air and keep at rest. In case of allergic symptoms, especially in the breathing area, seek medical advice immediately.

After contact with skin

Wash with plenty of water. If skin irritation or rash occurs: Get medical advice/attention.

After contact with eyes

Rinse immediately carefully and thoroughly with eye-bath or water. In case of troubles or persistent symptoms, consult an ophthalmologist.

After ingestion

Rinse mouth thoroughly with water. Let water be drunken in little sips (dilution effect). Do NOT induce vomiting. Never give anything by mouth to an unconscious person or a person with cramps. In all cases of doubt, or when symptoms persist, seek medical advice.

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

Caution if victim vomits: Risk of aspiration!
refer to chapter 2 and 11.

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 (CO₂). Dry extinguishing powder. alcohol resistant foam. Atomized water.

Unsuitable extinguishing media

High power water jet.

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5.2. Special hazards arising from the substance or mixture

Can be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO₂).

5.3. Advice for firefighters

In case of fire: Wear self-contained breathing apparatus.

Additional information

Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

Co-ordinate fire-fighting measures to the fire surroundings.

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

See protective measures under point 7 and 8.

6.2. Environmental precautions

Discharge into the environment must be avoided.

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

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.

Clean contaminated objects and areas thoroughly observing environmental regulations.

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**

Provide adequate ventilation.

Do not breathe vapour/aerosol. Avoid contact with skin, eyes and clothes.

Wear suitable protective clothing. (See section 8.)

Advice on protection against fire and explosion

The product itself does not burn. Usual measures for fire prevention.

Further information on handling

General protection and hygiene measures: See section 8.

7.2. Conditions for safe storage, including any incompatibilities**Requirements for storage rooms and vessels**

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

Hints on joint storage

Do not store together with: Explosives. Oxidizing solids. Oxidizing liquids. Radioactive substances. Infectious substances.

Further information on storage conditions

Keep the packing dry and well sealed to prevent contamination and absorption of humidity.

Protect against: UV-radiation/sunlight. heat. Humidity frost.

storage temperature: refer to specifications.

7.3. Specific end use(s)

See section 1.

SECTION 8: Exposure controls/personal protection

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8.1. Control parameters

DNEL/DMEL values

CAS No	Substance	Exposure route	Effect	Value
110-94-1	glutaric acid			
Worker DNEL, long-term		inhalation	systemic	11,52 mg/m ³
Worker DNEL, long-term		dermal	systemic	3,27 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	2,84 mg/m ³
Consumer DNEL, long-term		dermal	systemic	1,63 mg/kg bw/day
Worker DNEL, acute		inhalation	systemic	69,12 mg/m ³
Worker DNEL, acute		dermal	systemic	19,6 mg/kg bw/day
Consumer DNEL, acute		inhalation	systemic	17,04 mg/m ³
Consumer DNEL, long-term		oral	systemic	1,63 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	9,8 mg/kg bw/day
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol			
Worker DNEL, long-term		inhalation	systemic	1,76 mg/m ³
Worker DNEL, acute		inhalation	systemic	5,28 mg/m ³
Worker DNEL, long-term		dermal	systemic	0,5 mg/kg bw/day
Worker DNEL, acute		dermal	systemic	1,5 mg/kg bw/day
Consumer DNEL, long-term		inhalation	systemic	0,43 mg/m ³
Consumer DNEL, acute		inhalation	systemic	1,29 mg/m ³
Consumer DNEL, long-term		dermal	systemic	0,25 mg/kg bw/day
Consumer DNEL, acute		dermal	systemic	0,75 mg/kg bw/day
Consumer DNEL, long-term		oral	systemic	0,25 mg/kg bw/day
Consumer DNEL, acute		oral	systemic	0,75 mg/kg bw/day

PNEC values

CAS No	Substance	Environmental compartment	Value
110-94-1	glutaric acid		
		Freshwater	0,12 mg/l
		Marine water	0,012 mg/l
		Freshwater sediment	0,097 mg/kg
		Marine sediment	0,01 mg/kg
		Soil	0,002 mg/kg
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol		
		Freshwater	0.04 mg/l
		Freshwater (intermittent releases)	0.4 mg/l
		Marine water	0.004 mg/l

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Freshwater sediment	0.32 mg/kg
Marine sediment	0.032 mg/kg
Micro-organisms in sewage treatment plants (STP)	7 mg/l
Soil	0.028 mg/kg

Additional advice on limit values

To date, no national critical limit values exist.

8.2. Exposure controls**Appropriate engineering controls**

Provide adequate ventilation.

Protective and hygiene measures

The usual precautions for handling chemicals should be considered.

Keep away from food, drink and animal feedingstuffs.

Always close containers tightly after the removal of product. When using do not eat, drink, smoke, sniff. Wash hands before breaks and after work. Protect skin by using skin protective cream. Take off contaminated clothing.

Eye/face protection

Recommended eye protection brand: Tightly sealed safety glasses. (BS/EN 166)

Hand protection

Wear suitable gloves. (BS EN 374)

Suitable material: NBR (Nitrile rubber).

Thickness of glove material: 0,11 mm

break-through time: > 480 min.

In the case of wanting to use the gloves again, clean them before taking off and air them well. Before using check leak tightness / impermeability.

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.

Minimum standard for preventive measures while handling with working materials are specified in the TRGS 500 (D).

Respiratory protection

With correct and proper use, and under normal conditions, breathing protection is not required.

Environmental exposure controls

No special precautionary measures are necessary.

SECTION 9: Physical and chemical properties**9.1. Information on basic physical and chemical properties**

Physical state:	liquid.
Colour:	colourless
Odour:	odourless

Test method**Changes in the physical state**

Melting point: not applicable

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Boiling point or initial boiling point and boiling range: ~100 °C

Flash point: not determined

Explosive properties

none

Lower explosion limits: not determined

Upper explosion limits: not determined

Decomposition temperature: not determined

Oxidizing properties

none.

Vapour pressure: ~23 hPa
(at 20 °C)

Density: 1,007 g/cm³ N/A

Water solubility: completely miscible

Solubility in other solvents

not determined

Viscosity / dynamic: not determined
(at 20 °C)

Viscosity / kinematic: not determined
(at 20 °C)

Flow time: not determined

Relative vapour density: not determined

9.2. Other information

Solid content: not determined

SECTION 10: Stability and reactivity**10.1. Reactivity**

No information available.

10.2. Chemical stability

The mixture is chemically stable under recommended conditions of storage, use and temperature.

10.3. Possibility of hazardous reactions

No information available.

10.4. Conditions to avoid

Protect against: UV-radiation/sunlight. heat.

10.5. Incompatible materials

Materials to avoid: Oxidizing agents, strong. Reducing agents, strong. Strong acid. strong alkalis.

10.6. Hazardous decomposition productsCan be released in case of fire: Gas/vapours, irritant. Carbon monoxide Carbon dioxide (CO₂).**SECTION 11: Toxicological information****11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008****Toxicokinetics, metabolism and distribution**

No data available.

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	Method
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol				
	dermal	LD50 >2000 mg/kg	Rat	ECHA Dossier	OECD 402

Irritation and corrosivity

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

Sensitising effects

Contains 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.

Carcinogenic/mutagenic/toxic effects for reproduction

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

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

Aspiration hazard

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

Specific effects in experiment on an animal

No data available.

SECTION 12: Ecological information

12.1. Toxicity

CAS No	Chemical name					
	Aquatic toxicity	Dose	[h] [d]	Species	Source	Method
110-94-1	glutaric acid					
	Acute crustacea toxicity	EC50 6840 mg/l	48 h	Daphnia magna	ECHA	OECD 202
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol					
	Acute fish toxicity	LC50 36 mg/l	96 h	Pimephales promelas	ECHA Dossier	(OECD 203)
	Acute algae toxicity	ErC50 15 mg/l	72 h	Pseudokirchnerella subcapitata	ECHA Dossier	(OECD 201)
	Acute crustacea toxicity	EC50 88 mg/l	48 h	Daphnia magna	ECHA Dossier	(OECD 202)
	Acute bacteria toxicity	(630 mg/l)	0,5 h	activated sludge (OECD 209)	ECHA Dossier	(OECD 209)

12.2. Persistence and degradability

No data available

CAS No	Chemical name			
	Method	Value	d	Source
	Evaluation			
110-94-1	glutaric acid			
	OECD 301D / EEC 92/69 annex V, C.4-E	73%	28	ECHA
	readily biodegradable			
126-86-3	2,4,7,9-tetramethyldec-5-yne-4,7-diol			
	OECD 301B / ISO 9439 / EEC 92/69 annex V, C.4-C	5%	29	ECHA Dossier
	Not easily bio-degradable (according to OECD-criteria).			

12.3. Bioaccumulative potential

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Partition coefficient n-octanol/water

CAS No	Chemical name	Log Pow
110-94-1	glutaric acid	-0,256

12.4. Mobility in soil

No data available.

12.5. Results of PBT and vPvB assessment

The substances in the mixture do not meet the PBT/vPvB criteria according to REACH, annex XIII.

The components in this formulation do not meet the criteria for classification as PBT or vPvB.

12.7. Other adverse effects

No data available.

SECTION 13: Disposal considerations**13.1. Waste treatment methods****Disposal recommendations**

Dispose of waste according to applicable legislation. Consult the local waste disposal expert about waste disposal. Non-contaminated packages may be recycled. According to (EWC) European Waste Catalogue, allocation of waste identity numbers/waste descriptions must be carried out in a specific way for every industry and process.

Control report for waste code/ waste marking according to (EWC) European Waste Catalogue:

List of Wastes Code - residues/unused products

161002 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; aqueous liquid wastes destined for off-site treatment; aqueous liquid wastes other than those mentioned in 16 10 01

List of Wastes Code - used product

161002 WASTES NOT OTHERWISE SPECIFIED IN THE LIST; aqueous liquid wastes destined for off-site treatment; aqueous liquid wastes other than those mentioned in 16 10 01

List of Wastes Code - contaminated packaging

150106 WASTE PACKAGING; ABSORBENTS, WIPING CLOTHS, FILTER MATERIALS AND PROTECTIVE CLOTHING NOT OTHERWISE SPECIFIED; packaging (including separately collected municipal packaging waste); mixed packaging

Contaminated packaging

Handle contaminated packages in the same way as the substance itself.

Recommended cleaning agent: Water, if necessary together with cleansing agents.

SECTION 14: Transport information**Land transport (ADR/RID)**

14.1. UN number:	Not restricted
14.2. UN proper shipping name:	Not restricted
14.3. Transport hazard class(es):	Not restricted
14.4. Packing group:	Not restricted

Inland waterways transport (ADN)

14.1. UN number:	Not restricted
14.2. UN proper shipping name:	Not restricted
14.3. Transport hazard class(es):	Not restricted
14.4. Packing group:	Not restricted

Marine transport (IMDG)

14.1. UN number:	Not restricted
14.2. UN proper shipping name:	Not restricted

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14.3. Transport hazard class(es): Not restricted**14.4. Packing group:** Not restricted**Air transport (ICAO-TI/IATA-DGR)****14.1. UN number:** Not restricted**14.2. UN proper shipping name:** Not restricted**14.3. Transport hazard class(es):** Not restricted**14.4. Packing group:** Not restricted**14.5. Environmental hazards**

ENVIRONMENTALLY HAZARDOUS: No

14.6. Special precautions for user

See section 8.

14.7. Maritime transport in bulk according to IMO instruments

not relevant.

SECTION 15: Regulatory information**15.1. Safety, health and environmental regulations/legislation specific for the substance or mixture****EU regulatory information**

2010/75/EU (VOC): 0,96 % (calculated)

2004/42/EC (VOC): 9,667 g/l (calculated)

Information according to 2012/18/EU (SEVESO III): Not subject to 2012/18/EU (SEVESO III)

Additional information

The mixture is classified as not hazardous according to regulation (EC) No 1272/2008 [CLP].

REACH 1907/2006 Appendix XVII, No: not relevant

National regulatory information

Water hazard class (D): -- non-hazardous to water

Additional information

Observe technical data sheet.

15.2. Chemical safety assessment

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

SECTION 16: Other information**Changes**

Rev. 1.00; 23.02.2015, Initial release

Rev. 1.1; 24.11.2016, Indication of changes - chapter: 1, 2, 3, 6, 12, 15, 16.

Rev. 2.0; 05.03.2021, Indication of changes - chapter: 1 - 16.

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)

CAS Chemical Abstracts Service

DNEL: Derived No Effect Level

IARC: INTERNATIONAL AGENCY FOR RESEARCH ON CANCER

IMDG: International Maritime Code for Dangerous Goods

IATA: International Air Transport Association

IATA-DGR: Dangerous Goods Regulations by the "International Air Transport Association" (IATA)

ICAO: International Civil Aviation Organization

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ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
GefStoffV: Gefahrstoffverordnung (Ordinance on Hazardous Substances, Germany)
LOAEL: Lowest observed adverse effect level
LOAEC: Lowest observed adverse effect concentration
LC50: Lethal concentration, 50 percent
LD50: Lethal dose, 50 percent
NOAEL: No observed adverse effect level
NOAEC: No observed adverse effect concentration
NTP: National Toxicology Program
N/A: not applicable
OSHA: Occupational Safety and Health Administration
PNEC: predicted no effect concentration
PBT: Persistent bioaccumulative toxic
RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)
SARA: Superfund Amendments and Reauthorization Act
SVHC: substance of very high concern
TRGS Technische Regeln fuerGefahrstoffe
TSCA: Toxic Substances Control Act
VOC: Volatile Organic Compounds

Relevant H and EUH statements (number and full text)

H314	Causes severe skin burns and eye damage.
H317	May cause an allergic skin reaction.
H318	Causes serious eye damage.
H412	Harmful to aquatic life with long lasting effects.
EUH208	Contains 2,4,7,9-tetramethyldec-5-yne-4,7-diol. May produce an allergic reaction.
EUH210	Safety data sheet available on request.

Further Information

Classification according EC regulation 1272/2008 (CLP): - Classification procedure:
Health hazards: Calculation method.
Environmental hazards: Calculation method.
Physical hazards: On basis of test data and / or calculated and / or estimated.

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.

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