

Safety data sheet
according to 1907/2006/EC, Article 31

Printing date: 22.10.2012

Revision: 3

Revision: 22.10.2012

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

- **Date of issue:** 14.10.2011
- **1.1 Product identifier**
- **Trade name:** Flux 95-DRM 95-DRX+ 95-DRX-M+
- **Article number(s):** bz043
- **Synonym(s):** Flussmittel 95-DRM 95-DRX+ 95-DRX-M+
- **1.2 Relevant identified uses of the substance or mixture and uses advised against:**
No further relevant information available.
- **Application of the substance / the mixture:** Flux for soft soldering
- **1.3 Details of the supplier of the safety data sheet**
- **Manufacturer / Supplier:**
Balver Zinn
Josef Jost GmbH & Co.KG
Blintroper Weg 11
D-58802 Balve · Germany
Phone: +49 2375 915 – 0
Fax: +49 2375 915 – 114
E-Mail: Info@BalverZinn.com
- **Manufacturer:**
Cobar Europe BV
Aluminiumstraat 2
NL-4823 AL Breda · Netherlands
Phone: +31 76 5445566
Fax: +31 76 5445577
E-Mail: Info@Cobar.com
- **E-mail address of the competent person responsible for the Safety Data Sheet:** kontakt@trabaserio.eu
- **Informing department:** Technical Support of the Supplier
- **1.4 Emergency telephone number:** Giftnotruf Berlin +49 30 / 30686 790 - Helpdesk in German and English

SECTION 2: Hazards identification

- **2.1 Classification of the substance or mixture**
- **Classification according to Regulation (EC) No 1272/2008**



GHS02 flame

Flam. Liq. 2 H225 Highly flammable liquid and vapour.



GHS07

Eye Irrit. 2 H319 Causes serious eye irritation.

STOT SE 3 H336 May cause drowsiness or dizziness.

- **Classification according to Directive 67/548/EEC or Directive 1999/45/EC**



Xi; Irritant

R36: Irritating to eyes.



F; Highly flammable

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R11: Highly flammable.

R67: Vapours may cause drowsiness and dizziness.

Information concerning particular hazards for human and environment:

Has a narcotizing effect.

Long or repeated contact with skin may cause dermatitis due to the degreasing effect of the solvent.

Vapours of the product are heavier than air and may accumulate on the ground, in mines, drains or cellars with higher concentration.

In the gas volume of sealed packages vapours of flammable solvents, especially at action of heat, may accumulate.

Keep away fire and ignition sources.

Contact with skin and inhalation of aerosols/ vapours should be avoided.

Classification system:

The classification is according to the latest editions of the EU-lists, and extended by company and literature data.

2.2 Label elements**Labelling according to EU guidelines:****Code letter and hazard designation of product:**

Xi Irritant

F Highly flammable

Risk phrases:

11 Highly flammable.

36 Irritating to eyes.

67 Vapours may cause drowsiness and dizziness.

Safety phrases:

7 Keep container tightly closed.

16 Keep away from sources of ignition - No smoking.

24/25 Avoid contact with skin and eyes.

26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

2.3 Other hazards**Results of PBT and vPvB assessment**

PBT: not applicable

vPvB: not applicable

SECTION 3: Composition/information on ingredients**3.2 Mixtures**

Description: Aqueous mixture

Dangerous components:

CAS: 124-04-9 EINECS: 204-673-3 Index number: 607-144-00-9	Adipic acid Xi R36 Eye Irrit. 2, H319	≤2.5%
CAS: 67-63-0 EINECS: 200-661-7 Index number: 603-117-00-0	Propan-2-ol Xi R36; F R11 R67 Flam. Liq. 2, H225 Eye Irrit. 2, H319; STOT SE 3, H336	50 - 60%
CAS: 110-94-1 EINECS: 203-817-2	Glutaric acid Xi R36 Eye Irrit. 2, H319	1.5 - 3.0%

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· **Additional information** For the wording of the listed risk phrases refer to section 16.

SECTION 4: First aid measures

· 4.1 Description of first aid measures

· **General information:** Immediately remove any clothing contaminated by the product.

· **After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist. In case of unconsciousness bring patient into stable side position for transport.

· **After skin contact:**

Rinse with plenty of water.

After prolonged skin contact defatting of skin possible, use skin protecting agent after prolonged skin contact.

If skin irritation continues, consult a doctor.

· **After eye contact:**

Rinse opened eye for several minutes under running water.

Use eye protection.

Call a doctor immediately.

· **After swallowing:**

Rinse out mouth and then drink plenty of water.

Do not induce vomiting - Danger of chemical pneumonia.

Seek medical treatment.

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

Sickness

Headache

Dazed

Dizziness

Unconsciousness

Gastric or intestinal trouble

· **Information for doctor:** Treat symptomatically.

· **Danger:** Danger of pulmonary oedema.

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

Subsequent observation for pneumonia and pulmonary oedema.

May cause drowsiness or dizziness.

SECTION 5: Firefighting measures

· 5.1 Extinguishing media

· **Suitable extinguishing agents**

Carbon dioxide (CO₂), extinguishing powder or water spray/fog. Fight larger fires with water spray/fog or alcohol-resistant foam.

· **For safety reasons unsuitable extinguishing agents** Water with a full water jet.

· 5.2 Special hazards arising from the substance or mixture:

Danger of bursting

Can be released in case of fire:

Flammable gases/vapours

Irritant gases/vapours

Carbon monoxide (CO) and Carbon dioxide (CO₂)

Under certain fire conditions, traces of other toxic gases cannot be excluded.

· 5.3 Advice for firefighters

· **Protective equipment:**



Wear self-contained breathing apparatus.

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Additional information:

- Cool endangered containers with water spray jet.
- Dispose of fire debris and contaminated fire fighting water in accordance with official regulations.
- If without risk possible, move drums with material away from dangerous area.

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

- Ensure adequate ventilation.
- Use breathing protection against the effects of fumes/dust/aerosol.
- Avoid skin and eye contact.
- Remove all ignition sources.
- Wear protective clothing and keep away unprotected persons.

6.2 Environmental precautions:

- Damp down gases/fumes/haze with water spray jet.
- Do not allow to enter the ground/soil.
- Do not allow to enter drainage system, surface or ground water.

6.3 Methods and material for containment and cleaning up:

- Ensure adequate ventilation.
- Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
- Send for recovery or disposal in suitable containers.
- Dispose of the material collected according to regulations.

6.4 Reference to other sections

- See Section 7 for information on safe handling.
- See Section 8 for information on personal protection equipment.

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

- Ensure good interior ventilation, especially at floor level. (Fumes are heavier than air).
- Do not inhale vapours/aerosols.
- Make sure that all applicable workplace limits are observed.
- Avoid skin and eye contact.
- Open and handle container with care.
- Avoid splashes or spray in enclosed areas.
- Keep away from heat and direct sunlight.

Information about protection against explosions and fires:

- Protect against electrostatic charges.



Keep ignition sources away - Do not smoke.

- Fumes can combine with air to form an explosive mixture.
- Flammable mixtures may be formed in empty containers.
- Use explosion-proof apparatus / fittings and spark-proof tools.
- Have fire extinguishing equipment ready in case of nearby fire.
- Keep breathing equipment ready.
- Handle only outside or in explosion protected rooms.

7.2 Conditions for safe storage, including any incompatibilities**Storage****Requirements to be met by storerooms and containers:**

- Observe all local and national regulations for storage of water polluting products.

Information about storage in one common storage facility: Store away from oxidizing agents.**Further information about storage conditions:**

- Store container in a well ventilated position.

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Keep container tightly sealed.

Store in a cool place. Heat will increase pressure and may lead to the container exploding.

Store only outside or in explosion proof rooms.

· **7.3 Specific end use(s)** No further relevant information available.

SECTION 8: Exposure controls/personal protection

· **Additional information about design of technical systems:** No further data; see item 7.

· **8.1 Control parameters**

· **Components with critical values that require monitoring at the workplace:**

67-63-0 Propan-2-ol

WEL (Great Britain)	Short-term value: 1250 mg/m ³ , 500 ppm Long-term value: 999 mg/m ³ , 400 ppm
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· **DNELs** not applicable

· **PNECs** not applicable

· **Additional information:** The lists that were valid during the compilation were used as basis.

· **8.2 Exposure controls**

· **Personal protective equipment**

· **General protective and hygienic measures**

Keep away from foodstuffs, beverages and food.

Do not eat, drink or smoke while working.

Instantly remove any contaminated garments.

Do not carry cleaning cloths impregnated with the product in trouser pockets.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

Be sure to clean skin thoroughly after work and before breaks.

Apply solvent resistant clothing before beginning work.

· **Breathing equipment:**

Use breathing protection in case of insufficient ventilation.

If all workplace limits are observed and good ventilation is ensured, no special precaution necessary.

· **Recommended filter device for short term use:** Filter A

· **Protection of hands:**



Solvent resistant gloves

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation.

Check the permeability prior to each renewed use of the glove.

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation.

To avoid skin problems reduce the wearing of gloves to the required minimum.

Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

Protective gloves should be replaced at first signs of wear.

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

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· **Eye protection:**

Tightly sealed safety glasses

· **Body protection:**

Solvent resistant protective clothing
Protective clothing should be selected specifically for the working place.

· **Boots antistatic**· **Protective suit:** antistatic

SECTION 9: Physical and chemical properties

· **9.1 Information on basic physical and chemical properties**· **General Information**· **Appearance:**

Form: liquid
Colour: colourless
clear

· **Smell:**

mild
like alcohol

· **Odour threshold:**

not determined - no data available

· **pH-value:**

not determined

· **Change in condition**

Melting point/Melting range: not applicable
Boiling point/Boiling range: ~82 °C (IPA)

· **Flash point:**

< 21 °C (COC)

· **Inflammability (solid, gaseous)**

not applicable

· **Ignition temperature:**

~425 °C

· **Decomposition temperature:**

no data available

· **Self-inflammability:**

The product/the substance is not selfigniting.

· **Danger of explosion:**

Product is not explosive. However, formation of explosive air/vapour mixtures is possible.

· **Critical values for explosion:**

Lower: 2 Vol % (IPA)
Upper: 12 Vol % (IPA)

· **Oxidizing properties**

Not classified as oxidising.

· **Vapour pressure at 20 °C:**

~48 mbar

· **Density at 20 °C**0.895 - 0.915 g/cm³ (± 0,5%)· **Settled apparent density**

not applicable

· **Vapour density (AIR = 1)**

not determined

· **Evaporation rate**

not determined

· **Solubility in / Miscibility with****Water:** soluble· **Organic solvents:**

Miscible with many organic solvents

· **Partition coefficient (n-octanol/water):** no data available· **Viscosity:****dynamic:** not determined

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kinematic:	not determined
Organic solvents:	50 - 60 %
Water:	40 - 45 %
VOC (EU)	50 - 60%
VOCV (CH)	50 - 60%
· 9.2 Other information	See technical data sheet.

SECTION 10: Stability and reactivity

- **10.1 Reactivity**
- **Chemical stability** Stable, under normal conditions.
- **Thermal decomposition / conditions to be avoided:** Avoid impact, friction, heat, sparks, electrostatic charges.
- **10.3 Possibility of hazardous reactions**
Danger of bursting
Develops readily flammable gases / fumes.
Used empty containers may contain product gases which form explosive mixtures with air.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** Strong oxidizing agents
- **10.6 Hazardous decomposition products:**
Irritant gases/vapours
Carbon monoxide (CO) and Carbon dioxide (CO₂)

SECTION 11: Toxicological information

- **11.1 Information on toxicological effects**
- **Acute toxicity:**

- **LD/LC50 values that are relevant for classification:**

67-63-0 Propan-2-ol

Oral	LD50	3600 mg/kg (mouse)
		4570 - 5045 mg/kg (rat)
		6410 mg/kg (rabbit)
Dermal	LDLo	3570 mg/kg (human)
	LD50	12800 - 13400 mg/kg (rabbit)
Inhalative	LC50/4 h	30 - 46.5 mg/l (rat)

110-94-1 Glutaric acid

Oral	LD50	6000 mg/kg (mouse)
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124-04-9 Adipic acid

Oral	LD50	~5700 mg/kg (rat)
Dermal	LD50	> 7940 mg/kg (rabbit)
Inhalative	LC50/4 h	> 7.7 mg/l (rat) (BASF-Test)

- **Primary irritant effect:**
- **on the skin:** Long or repeated contact can defat skin and may cause dermatitis.
- **on the eye:** Causes serious eye irritation.
- **Sensitization:** No sensitizing effect known.
- **Additional toxicological information:**
The product shows the following dangers according to the calculation method of the General EC Classification Guidelines for Preparations as issued in the latest version:

Irritant

Inhalation of concentrated vapours may lead to anaesthesia-like conditions and headache, dizziness, etc.

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- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
According to present knowledge no CMR-effects known.

SECTION 12: Ecological information

· 12.1 Toxicity

· Aquatic toxicity:

67-63-0 Propan-2-ol

EC50/24 h	> 1000 mg/l (water flea (daphnia magna))
EC50/48 h	13299 mg/l (water flea (daphnia magna))
IC50/72 h	> 1000 mg/l (algae (scenedesmus subspicatus))
LC50/48 h	8970 mg/l (leuciscus idus)
LC50/96 h	9640 mg/l (fathead minnow (pimephales promelas))

110-94-1 Glutaric acid

EC10	63 mg/l (pseudomonas putida)
EC50/48 h	88.4 mg/l (water flea (daphnia magna))
IC50/96 h	35 mg/l (algae (desmodesmus subspicatus))

124-04-9 Adipic acid

EC50/17 h	91.9 mg/l (pseudomonas putida)
EC50/3 h	7.911 mg/l (pseudomonas putida)
EC50/48 h	86.5 mg/l (water flea (daphnia magna))
EC50/72 h	31.3 mg/l (algae (scenedesmus subspicatus))
LC50/48 h	100 - 511 mg/l (leuciscus idus)
LC50/96 h	88 - 97 mg/l (fathead minnow (pimephales promelas))

- **12.2 Persistence and degradability** No further relevant information available.
- **12.3 Bioaccumulative potential** No further relevant information available.
- **12.4 Mobility in soil** No further relevant information available.
- **Additional ecological information:**
- **Chemical Oxygen Demand (COD-value):** not determined
- **BOD5-value:** not determined
- **AOX-indication:** The product does not contain organically bounded halogens (AOX-free).
- **According to recipe contains the following heavy metals and compounds according to EC guideline NO. 76/464 EC:**
The product does not contain heavy metals.
- **General notes:**
Do not allow undiluted product or large quantities of it to reach ground water, water bodies or sewage system.
Water hazard class 1 (Self-assessment): slightly hazardous for water
- **12.5 Results of PBT and vPvB assessment**
- **PBT:** not applicable
- **vPvB:** not applicable
- **12.6 Other adverse effects** No further relevant information available.

SECTION 13: Disposal considerations

- **13.1 Waste treatment methods**
- **Recommendation**



Disposal must be made according to official regulations.

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· **Waste disposal key number:** According to local/national regulations.

· **European waste catalogue:**

07 07 04* other organic solvents, washing liquids and mother liquors

· **Uncleaned packagings:**

· **Recommendation:**

Empty contaminated packagings thoroughly. They can be recycled after thorough and proper cleaning.
Packagings that cannot be cleaned are to be disposed of in the same manner as the product.

· **Recommended cleaning agent:** Water

SECTION 14: Transport information

· **14.1 UN-Number**

· **ADR, ADN, IMDG, IATA** UN1993

· **14.2 UN proper shipping name**

· **ADR** UN 1993 FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)
· **IMDG, IATA** FLAMMABLE LIQUID, N.O.S. (ISOPROPANOL)

· **14.3 Transport hazard class(es)**

· **ADR**



· **Class** 3 (F1) Flammable liquids.
· **Label** 3

· **IMDG, IATA**



· **Class** 3 Flammable liquids.
· **Label** 3

· **14.4 Packing group**

· **ADR, IMDG, IATA** II

· **Environmental hazards:**

not applicable

· **Marine pollutant:**

NO

· **14.6 Special precautions for user:**

Warning: Flammable liquids.

· **Kemler Number:**

33

· **EMS Number:**

F-E,S-E

· **Transport in bulk according to Annex II of**

MARPOL73/78 and the IBC Code: Not applicable.

· **Additional Transportinformation:**

Transport by post may be prohibited or restricted.

· **ADR**

· **Excepted quantities (EQ):** E2

· **Limited quantities (LQ):** 1L

· **Transport category:** 2

· **Tunnel restriction code:** D/E

· **Remarks:** Special provision 640D

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· UN "Model Regulation": UN1993, FLAMMABLE LIQUID, N.O.S., 3, II

SECTION 15: Regulatory information

- 15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture
- Designation according to EC guidelines:
- Code letter and hazard designation of product:



Xi Irritant
F Highly flammable

- Risk phrases:
 - 11 Highly flammable.
 - 36 Irritating to eyes.
 - 67 Vapours may cause drowsiness and dizziness.
- Safety phrases:
 - 7 Keep container tightly closed.
 - 16 Keep away from sources of ignition - No smoking.
 - 24/25 Avoid contact with skin and eyes.
 - 26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
- National regulations
- Information about limitation of use: Employment restrictions concerning young persons must be observed.
- Decree to be applied in case of technical fault:
 - Quantity limits according to „EC Seveso Directive“ should be observed.
- Water hazard class: Water hazard class 1 (Self-assessment): slightly hazardous for water
- Other regulations, limitations and prohibitive regulations
 - Observe restrictions on the marketing and use according to Annex XVII of Regulation (EC) No 1907/2006.
- 15.2 Chemical safety assessment: A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

These data are based on our present knowledge. However, they shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- Reasons for changes:
 - The Material Safety Data Sheet has been revised. Changes in the respective chapters are characterized in the left side edge by *.
- Relevant phrases:
 - H225 Highly flammable liquid and vapour.
 - H319 Causes serious eye irritation.
 - H336 May cause drowsiness or dizziness.
 - R11 Highly flammable.
 - R36 Irritating to eyes.
 - R67 Vapours may cause drowsiness and dizziness.
- Department issuing MSDS:
 - TRABASERIO S.L.
 - C./Isabel II, N° 67, Pl. Baja A
 - 07100 Sóller / Spain
 - Tel. & Fax: +34 971 63 34 64 · E-Mail: kontakt@trabaserio.eu

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· Abbreviations and acronyms:

RID: Règlement international concernant le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

ICAO: International Civil Aviation Organization

GGVSEB (Gefahrgutverordnung Straße, Eisenbahn und Binnenschifffahrt): Ordinance on the national and international carriage of dangerous goods by road, rail, and inland waterways

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

CLP: Regulation on Classification, Labelling and Packaging of Substances and Mixtures

DNEL: Derived No-Effect Level (REACH)

PNEC: Predicted No-Effect Concentration (REACH)

LC50: Lethal concentration, 50 percent

LD50: Lethal dose, 50 percent

· * Data compared to the previous version altered.

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