

Material & Safety Data Sheet

According to 1907/2006/EC

Document : MBO Hydrosoluble Organic Soldering Fluxes

Created date: 15/07/05 - Updated:06/07/09 - Update Nr : 01

ISO 11014-1
(1194-F)



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1- IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND THE COMPANY:

- Trade name: **MBO Hydrosoluble Organic Fluxes
H32M - H35M - H325M - H350M
H351M - H352M - H353M - H300M
DCF003 - H302M**

- Application of the substance/preparation: **Soft soldering**

- Manufacturer: **M.B.O.
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2- HAZARDS IDENTIFICATION:

- Hazard description:

F = Highly flammable

Xi = Irritant

R 11 Highly flammable.

R 36 Irritating to eyes.

R 67 Vapours may cause drowsiness and dizziness.

- Information concerning particular hazards for human and environment:

The product is highly flammable.

The product under liquid form and vapour form is irritating to eyes.

The product could cause irritation to respiratory system, and may cause drowsiness and dizziness in case of prolonged inhalation of fumes during soldering.

The product could cause sensitisation if in prolonged contact with skin.

- Prevention:

It is recommended to wear safety glasses, latex gloves, to wash hands after use and to work with a good ventilation of area.

- Label elements:



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3- COMPOSITION/INFORMATION ON INGREDIENTS:

Product	CAS n°	EC n°	R Phrases	S Phrases	%
Isopropanol	67-63-0	200-661-7	F, Xi R11-36-67	S7-16-24/25-26	See table below
Organic acid	124-04-9	204-673-3	Xi R36	S2	
Amine compound	557-66-4	209-182-8	Xi R36/37/38	S26-36	
Glycerin	56-81-5	200-289-5	-	-	

	<u>Dry extract %</u>	<u>Isopropanol %</u>
H32M	< 4 %	50 à 96 %
H35M	< 10 %	50 à 60 %
H325M	< 4 %	50 à 96 %
H350M	< 10 %	50 à 60 %
H351M	< 20%	50 à 60 %
H352M	< 5 %	50 à 70 %
H353M	< 10 %	50 à 60 %
H300M	< 10%	50 à 90%
DCF003	< 10%	> 90 %
H302M	< 10%	50 à 90%

4- FIRST AID MEASURES:

- General information:

Immediately remove any clothing soiled by the product.

Take affected persons out into the fresh air.

Take affected persons out of danger area and lay down.

- After inhalation:

In case of unconsciousness place patient stably in side position for transportation.

Take affected persons into fresh air and keep quiet.

- After skin contact:

Immediately wash with water and soap and rinse thoroughly.

If skin irritation continues, consult a doctor.

- **After eye contact:** Rinse opened eye for several minutes under running water. Then consult a doctor.

- After swallowing:

Call for a doctor immediately.

A person vomiting while laying on their back should be turned onto their side.

- Information for doctor:

The following symptoms may occur:

Headache

Coughing

Dizziness

Nausea

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5- FIRE-FIGHTING MEASURES:

- Suitable extinguishing agents:

CO₂, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
Use fire extinguishing methods suitable to surrounding conditions.

- Extinguishing agents to avoid:

Do not use a heavy water stream.

- Special hazards caused by the substance, its products of combustion or resulting gases:

Carbon monoxide (CO)

- Protective equipment:

Wear appropriate self-contained breathing apparatus.
Do not inhale explosion gases or combustion gases.
Wear full body protective clothing.

- Additional information:

Use large quantities of foam as it is partially destroyed by the product.
Collect contaminated fire fighting water separately. It must not enter the sewage system.

6- ACCIDENTAL RELEASE MEASURES:

- Person-related safety precautions:

Remove persons from danger area.
Wear protective equipment. Keep unprotected persons away.
Use respiratory protective device against the effects of fumes/dust.
Keep away from ignition sources.

- Measures for environmental protection:

Prevent seepage into sewage system, workpits and cellars.
Do not allow to enter sewers/ surface or ground water.

- Measures for cleaning/collecting:

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Store the released product in sealed containers.
Ensure adequate ventilation.

- Additional information:

See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.

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7- HANDLING AND STORAGE :

- Handling:

Information for safe handling:

Ensure good ventilation/exhaustion at the workplace.

Information about fire - and explosion protection:

Keep ignition sources away - Do not smoke.

Fumes can combine with air to form an explosive mixture.

Protect against electrostatic charges.

Do not spray onto a naked flame or any incandescent material.

S20 When using do not eat or drink.

S21 When using do not smoke.

S24/25 Avoid contact with skin and eyes.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S37 Wear suitable gloves.

S51 Use only in well-ventilated areas.

Wash hands after use.

- Storage:

Requirements to be met by storerooms and receptacles:

Provide solvent resistant, sealed floor.

Use only receptacles specifically permitted for this substance/product.

Information about storage in one common storage facility: Store away from oxidizing agents.

Further information about storage conditions:

Keep receptacle tightly sealed.

Store in cool, dry conditions in well sealed receptacles.

Protect from heat and direct sunlight.

8- EXPOSURE CONTROLS/PERSONAL PROTECTION:

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

- Ingredients with limit values that require monitoring at the workplace:

67-63-0 propan-2-ol

OEL Short-term value: 1250 mg/m³, 500 ppm

Long-term value: 999 mg/m³, 400 ppm

Additional information: The lists valid during the making were used as basis.

- Personal protective equipment:

General protective and hygienic measures:

The usual precautionary measures are to be adhered to when handling chemicals.

Keep away from foodstuffs, beverages and feed.

Immediately remove all soiled and contaminated clothing

Wash hands before breaks and at the end of work.

Do not inhale gases / fumes / aerosols.

Avoid contact with the eyes and skin.

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Respiratory protection: Use suitable respiratory protective device in case of insufficient ventilation.

Protection of hands:

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



Protective gloves

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.

Neoprene gloves

Penetration time of glove material

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

Eye protection:



Tightly sealed goggles

Body protection: Protective work clothing

9- PHYSICAL AND CHEMICAL PROPERTIES:

- **State:** Liquid at 20°C
- **Colour:** Colourless
- **Boiling point:** 80°C
- **Flash point:** 18°C (opened cup)
- **Application:** For soft soldering

	<u>Acid number</u>	<u>Chloride content</u>	<u>Density</u>
H32M	65 +/-2.3 mg/g	N/A	0.950 +/-0.005
H35M	120 +/- 4.2mg/g	N/A	0.970 +/-0.005
H325M	65 +/- 2.3mg/g	0.2 +/-0.014%	0.950 +/-0.005
H350M	120+/-4.2 mg/g	0.4+/-0.03 %	0.970 +/-0.005
H351M	120+/-4.2 mg/g	1.0 +/- 0.07%	0.970 +/-0.005
H352M	N/A	1.3+/-0.1%	0.920 +/-0.005
H353M	N/A	2.2+/-0.15%	0.920 +/-0.005
H300M	85 +/- 10 mg/g	N/A	0.878 +/- 0.005
DCF003	85 +/- 5 mg/g	3 +/- 0.2%	0.830 +/- 0.01
H302M	65 +/- 5 mg/g	NA	0.863 +/- 0.005

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10- STABILITY AND REACTIVITY:

- Stability:

Stable.

- Thermal decomposition / conditions to be avoided:

No decomposition if used according to specifications.

- Hazardous decomposition products:

Carbon monoxide and carbon dioxide

11- TOXICOLOGICAL INFORMATION:

- Acute toxicity:

LD/LC50 values relevant for classification: Isopropanol

Oral LD50 4570 mg/kg (rat)

Dermal LD50 13400 mg/kg (rab)

Inhalative LC50/4 h 30 mg/l (rat)

CL 50 24 heures 8600 mg/litre (DAPHNIES)

10100 mg/litre (POISSON)

- Primary irritant effect:

on the skin: Irritant to skin and mucous membranes.

on the eye: Irritating effect.

on the respiratory system: The product could cause irritation to respiratory system.

- **Sensitization:** Sensitizing effect by skin contact is possible by prolonged exposure.

12- ECOLOGICAL INFORMATION:

- General notes:

Do not allow product to reach ground water, water course or sewage system.

13- DISPOSAL CONSIDERATIONS:

Disposal must be made according to official regulations.

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14- TRANSPORT INFORMATION:

- Land transport ADR/RID (cross-border)



ADR/RID class: 3 (F1) Flammable liquids.

- Danger code (Kemler): 33
- UN-Number: 1219
- Packaging group: II
- Hazard label 3
- Description of goods: 1219 ISOPROPANOL (ISOPROPYL ALCOHOL)
- Tunnel restriction code D1E

- Maritime transport IMDG:



- IMDG Class: 3
- UN Number: 1219
- Label 3
- Packaging group: II
- EMS Number: F-E,S-D
- Proper shipping name: ISOPROPANOL (ISOPROPYL ALCOHOL)

- Air transport ICAO-TI and IATA-DGR:



- ICAO/IATA Class: 3
- UN/ID Number: 1219
- Label 3
- Packaging group: II
- Proper shipping name: ISOPROPANOL (ISOPROPYL ALCOHOL)

- UN "Model Regulation": UN1219, ISOPROPANOL (ISOPROPYL ALCOHOL), 3, II

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15- REGULATORY INFORMATION:

- Labelling according to EU guidelines:

The product has been marked in accordance with EU Directives / respective national laws.

- Code letter and hazard designation of product:



Xi Irritant



F Highly flammable

- Risk phrases:

R11 Highly flammable.

R36 Irritating to eyes.

R67 Vapours may cause drowsiness and dizziness.

- Safety phrases:

S7 Keep container tightly closed.

S16 Keep away from sources of ignition - No smoking.

S24/25 Avoid contact with skin and eyes.

S26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

16- OTHER INFORMATION:

This material safety data sheet is entirely written in accordance with regulations in force.

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)

RID: Reglement internationale concernent le transport des marchandises dangereuses par chemin de fer (Regulations Concerning the International Transport of Dangerous Goods by Rail)

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

ICAO-TI: Technical Instructions by the "International Civil Aviation Organization" (ICAO)

GHS: Globally Harmonized System of Classification and Labelling of Chemicals

EINECS: European Inventory of Existing Commercial Chemical Substances

CAS: Chemical Abstracts Service (division of the American Chemical Society)

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