



SAFETY DATA SHEET

1. PRODUCT IDENTIFICATION

Name of product: LIQUID BUFFER CFC-FREE

Manufacture Information: MARUNI INDUSTRY CO., LTD.
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Emergency advice: Phone +81-6-6716-4171

Recommended use(s): Cleaner

2. Hazards Identification

GHS Classification

| | |
|---|--|
| Flammable Liquid | Category 2 |
| Skin corrosion/irritation | Category 2 |
| Eye corrosion/irritation | Category 2A |
| Skin sensitization | Category 1 |
| Specific target organ toxicity - Single exposure | Category 3(drowsiness and dizziness, respiratory irritation) |
| Aspiration hazard | Category 1 |
| Acute toxicity to the aquatic environment | Category 1 |
| Chronic toxicity to the aquatic environment | Category 1 |

Label Elements

Pictogram and Symbol :



Signal word : Danger

Hazard statement :

| | |
|------|------------------------------------|
| H225 | Highly flammable liquid and vapour |
| H315 | Causes skin irritation |
| H319 | Causes serious eye irritation |



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| | |
|------|--|
| H317 | May cause an allergic skin reaction |
| H335 | May cause respiratory irritation |
| H336 | May cause drowsiness or dizziness |
| H304 | May be fatal if swallowed and enters airways |
| H400 | Very toxic to aquatic life |
| H410 | Very toxic to aquatic life with long lasting effects |

Precautionary statements :

Prevention

| | |
|------|---|
| P210 | Keep away from heat/sparks/open flames/ hot surface . No smoking. |
| P240 | Ground/bond container and receiving equipment |
| P241 | Use explosion-proof electrical equipment. |
| P242 | Use only non-sparking tools |
| P243 | Take precautionary measures against static discharge |
| P261 | Avoid breathing dust/fume/gas/mist/vapours/spray |
| P264 | Wash hand thoroughly after handling |
| P271 | Use only outdoors or in a well-ventilated area |
| P272 | Contaminated work clothing should not be allowed out of the workplace. |
| P273 | Avoid release to the environment. |
| P280 | Wear protective gloves/protective clothing/eye protection/face protection |

Response

| | |
|----------------|--|
| P301+P310 | IF SWALLOWED: Immediately call a POISON CENTER or doctor/physician |
| P302+P352 | IF ON SKIN: Wash with plenty of soap and water. |
| P303+P361+P353 | IF ON SKIN(or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower. |
| P304+P340 | IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. |
| P305+P351+P338 | IF IN EYES: Rinse continuously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. |
| P312 | Call a POISON CENTER or doctor/physician if you feel unwell. |
| P331 | Do not induce vomiting |
| P332+P313 | IF skin irritation occurs: Get medical advice/attention |
| P337+P313 | IF eye irritation persists: Get medical advice/attention |
| P342+P311 | IF experiencing respiratory symptoms: Call a POISON CENTER or doctor/physician |
| P362 | Take off contaminated clothing and wash before reuse |
| P370+P378 | In case of fire: Use dry chemical powder,appropriate foam,carbon dioxide for extinction. |
| P391 | Collect spillage |



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Storage

P403+P233+P235 Store in a well-ventilated place. Keep container tightly closed. Keep cool.

P405 Store locked up

Disposal

P501 Dispose of contents/ container in accordance with local/ regional/ national/ international regulations.

3. Composition/ information on ingredients

Chemical Identity Cleaner

Synonyms - - -

Chemical Formula Mixture

| CAS No. | Component Name | Percent |
|------------|----------------------------|---------|
| 68513-03-1 | Solvent naphtha | >50 |
| 108-65-6 | 1-methoxy-2-propyl acetate | <50 |
| 5989-27-5 | D-limonene | <50 |

4. First aid and Measures

4.1 Description of first aid measures

General advice

Consult a physician. Show this safety data sheet to the doctor in attendance.

If inhaled

If breathed in, move person into fresh air. If not breathing, give artificial respiration. Consult a physician.

In case of skin contact

Wash off with soap and plenty of water, Consult a physician.

In case of eye contact

Rinse thoroughly with plenty of water for at least 15 minutes and consult a physician.

If swallowed

Never make him/her vomit by force. Rinse mouth with water. Consult a physician.

4.2 Most important symptoms and effects, both acute and delayed

The most important known symptoms and effects are described in the labelling (see section 2)



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and/or in section 11.

4.3 Indication of any immediate medical attention and special treatment needed

No data available

5. Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media

Dry powder, Carbon dioxide, Alcohol-resistant foam. Use water spray or fog to control fire fumes.

Unsuitable extinguishing media

Do not use a solid water stream.

5.2 Special hazards arising from the substance or mixture

Specific hazards

Exposure to fire may cause containers to rupture / explode.

Hazardous combustion products

If involved in a fire, the following toxic and / or corrosive fumes may be produced by thermal decomposition: Carbon dioxide and Carbon monoxide

5.3 Advice for fire-fighters

Specific methods

If possible, stop flow of product. If leaking, do not extinguish a flame unless absolutely necessary.

Spontaneous / explosive re-ignition may occur. Extinguish any other fire. Move container away or cool with water from a protected position. Prevent water used in emergency cases from entering sewers and drainage systems.

5.4 Further information

No data available

6. Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Remove ignition sources and ventilate the area. In case of insufficient ventilation, wear suitable respiratory equipment. Avoid raising dust and avoid contact with skin and eyes.

6.2 Environmental precautions

Prevent spills from entering sewers, watercourses or low areas.



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6.3 Methods and materials for containment and cleaning up

Do not touch spilled material without suitable protection (See section 8). After material is completely picked up, wash the spill with soap and water and ventilate the area. Put all wastes in a plastic bag for disposal and seal it tightly. Remove, clean, or dispose of contaminated clothing.

6.4 Reference to other sections

For disposal see section 13.

7. Handling and storage

7.1 Precautions for safe handling

Avoid contact with eyes, skin and clothing. Avoid prolonged or repeated exposure. Handle material with suitable protection.

7.2 Conditions for safe storage, including any incompatibilities

Store away from sunlight in well-ventilated dry place at room temperature (preferably cool place). Keep container tightly closed.

8. Exposure controls/ Personal protection

8.1 Engineering measures

Use exhaust ventilation to keep airborne concentrations below exposure limits.
Use adequate ventilation.

8.2 Ventilation

Local exhaust; recommended, mechanical(General) ; recommended

8.3 Control parameters

| Component Name | ACGIH TLV-TWA | OSHA PEL-TWA |
|----------------------------|---------------|--------------|
| Solvent naphtha | 400 ppm | - |
| 1-methoxy-2-propyl acetate | - | - |
| D-limonene | - | - |

8.4 Personal protection

| | |
|------------------------|----------------------------|
| Respiratory protection | Safety masks |
| Hand protection | Chemical resistance gloves |
| Eye protection | Safety glasses(goggles) |
| Skin protection | Protective clothing |



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9. Physical and Chemical properties

| | | | |
|---------------|------------------------------|--|--|
| # element 1 | : Solvent naphtha | | |
| ## element 2 | : 1-methoxy-2-propyl acetate | | |
| ### element 3 | : D-limonene | | |

9.1 Information on basic physical and chemical properties

| | | | |
|--|------------------------------|--------------------------|--------------------------|
| a) Appearance | Clear and colorless | | |
| b) Odour | Characteristic | | |
| c) Odour Threshold | No data available | | |
| d) pH | No data available | | |
| e) Melting point/freezing point | -95°C(element 1) | <-10°C(element 2) | -74°C(element 3) |
| f) Initial boiling point and boiling range | 90~125°C(element 1) | 146°C(element 2) | 176°C(element 3) |
| g) Flash point | -11.5°C(element 1) | 42°C(element 2) | 48°C(element 3) |
| h) Evaporation rate | | No data available | |
| i) Upper explosive limits | 7 vol%(element 1) | 7 .0vol%(element 2) | 6.1 vol%(element 3) |
| Lower explosive limits | 1 vol%(element 1) | 1.5 vol%(element 2) | 0.7 vol%(element 3) |
| j) Vapour pressure | 7 kPa at 20°C(element 1) | 0.5kPa 25°C(element 2) | 0.2kPa 20°C(element 3) |
| k) Vapour density (air=1) | 3.6 (element 1) | 4.6 (element 2) | 4.7 (element 3) |
| l) Relative density | | 0.77 g/ml | |
| m) Water solubility (g/L, in water) | 0.1 at 20°C (element 1) | >100 at 25°C (element 2) | 0.01 at 25°C (element 3) |
| n) Partition coefficient : n-octanol/water | No data available(element 1) | log Pow=0.36 (element 2) | log Pow=4.6 (element 3) |
| o) Auto-ignition temperature | 258°C(element 1) | 354°C(element 2) | 237°C(element 3) |
| p) Decomposition temperature | | No data available | |
| q) Viscosity | | No data available | |

10. Stability and reactivity

10.1 Reactivity

No reactivity hazard other than the effects described in sub-sections below.

10.2 Chemical stability

Stable under normal conditions.

10.3 Possibility of hazardous reactions

Can form potentially explosive atmosphere in air. May react violently with oxidants.

10.4 Conditions to avoid

Keep away from heat/sparks/open flames/hot surfaces. -No smoking.



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10.5 Incompatible materials

Air, Oxidiser

10.6 Hazardous decomposition products

Under normal conditions of storage and use, hazardous decomposition products should not be produced. If involved in a fire the following toxic and/or corrosive fumes may be produced by thermal decomposition;

Carbon dioxide and Carbon mono-oxide

11. Toxicological information

element 1 : Solvent naphtha
 ## element 2 : 1-methoxy-2-propyl acetate
 ### element 3 : D-limonene

11.1 Information on toxicological effects

| | (element 1) | (element 2) | (element 3) |
|---|-------------------|---------------------|-------------------|
| Acute toxicity | | | |
| LD50 Oral - Rat - | >7g/kg | >8,532mg/kg | 4.4g/kg |
| Skin corrosion/irritation | | | |
| Skin - Rabbit | Moderate | not irritating | |
| Result : | Group 2 | | Group 2 |
| Eye damage/eye irritation | | | |
| Eyes - Rabbit | Not irritating | Slightly irritating | No data available |
| Result : | | Group 2B | |
| Respiratory sensitization | | | |
| | No data available | Not sensitizing | No data available |
| skin sensitization | | | |
| | Not sensitizing | No data available | Group 1 |
| Germ cell mutagenicity | | | |
| | | No data available | Negative |
| Carcinogenicity | | | |
| | Not classified | No data available | Not classified |
| Reproductive toxicity | | | |
| | No data available | No data available | No data available |
| Specific target organ toxicity - single exposure | | | |
| | Group 3 | Group 3 | No data available |
| Specific target organ toxicity - repeated exposure | | | |
| | | Not classified | No data available |
| Aspiration hazard | | | |
| | Group 1 | No data available | No data available |



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12. Ecological information

| | (element 1) | (element 2) | (element 3) |
|--|---|--------------------------------|---------------------------------|
| 12.1 Toxicity | | | |
| LC50 | 0.1mg/L/96h (Mysidopsis bahia) | 180mg/L/96h (Rainbow Trout) | 0.7mg/L/96h (fathead minnow) |
| 12.2 Persistence and degradability | | | |
| BOD | No data available | No data available | No data available |
| 12.3 Bioaccumulative potential | | | |
| | No data available | No data available | No data available |
| 12.4 Mobility in soil | | | |
| | No data available | No data available | No data available |
| 12.5 Results of PBT and vPvB assessment | Non-classified PBT substance, Non-classified vPvB substance | | |
| 12.6 Other adverse effects | Toxic to aquatic life with long lasting effects. | | |

13. Disposal considerations

Waste treatment methods

Product

Offer surplus and non-recyclable solutions to a licensed disposal company.

Contaminated packaging

Dispose of as unused product.

14. Transport information

14.1 UN number

ADR/RID : 1993 IMDG : 1993 IATA : 1993

14.2 UN proper shipping name

ADR/RID : FLAMMABLE LIQUID, N.O.S
IMDG : FLAMMABLE LIQUID, N.O.S
IATA : FLAMMABLE LIQUID, N.O.S



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14.3 Transport hazard class(es)

ADR/RID : 3

IMDG : 3

IATA : 3

14.4 Packaging group

ADR/RID : II

IMDG : II

IATA : II

14.5 Environmental hazards

ADR/RID : Environmentally Hazardous Substance

IMDG : Environmentally Hazardous Substance

IATA : Environmentally Hazardous Substance

14.6 Special precautions for user

Keep away from sources of heat and ignition.

15. Regulatory information

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

Authorisations and/or restrictions on use

Notification Status

| | |
|-------------------------------|--|
| Europe REACH | :On inventory, or in compliance with the inventory |
| United States of America TSCA | :On inventory, or in compliance with the inventory |
| Japan ENCS | :On inventory, or in compliance with the inventory |

15.2 Chemical Safety Assessment

For this product a chemical safety assessment was not carried out

16. Other information

NOTICE: MARUNI INDUSTRY CO., LTD. believes that information contained on this safety data sheet is accurate. The suggested procedures are based on experience as of the date of publication. They are not necessarily all-inclusive nor fully adequate in every circumstance. Also, the suggestions should not be confused with nor followed in violation of applicable laws, regulations, rules or insurance requirements.

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Maruni Industry Co., Ltd

Date:May 8, 2025

Technical Division