

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

Printing date 07.06.2021

Version number 2.0

Revision: 02.06.2021

**SECTION 1: Identification of the substance/mixture and of the company/undertaking****1.1 Product identifier****Trade name:** Bromine index solution, according to ASTM D5776-99**Article number:** ME0736**1.2 Relevant identified uses of the substance or mixture and uses advised against**

No further relevant information available.

**Application of the substance / the preparation:** Laboratory reagent**1.3 Details of the supplier of the safety data sheet****Manufacturer/Supplier:**

Scharlab, S.L.

C/Gato Pérez, 33. Pol.Ind. Mas d'en Cisa

08181 Sentmenat (Barcelona) SPAIN

Tel: (+34) 93 745 64 00 - FAX: (+34) 93 715 27 65

email: scharlab@scharlab.com

Internet Web Site: www.scharlab.com

**Regional representation:**

Scharlab, S.L.

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Internet Web Site: www.scharlab.com

**Further information obtainable from:** technical department**1.4 Emergency telephone number:**

Toxicological Information National Institute of Toxicology and Forensic Sciences: + 34 91 562 04

20. The information will be provided (24h/365 days)

Please contact the regional Scharlab distributor/dealer in your country

During normal opening times: Scharlab, S.L. (+34) 93 715 18 11

**SECTION 2: Hazards identification****2.1 Classification of the substance or mixture****Classification according to Regulation (EC) No 1272/2008**

GHS08 health hazard

Repr. 1B H360D May damage the unborn child.

STOT SE 2 H371 May cause damage to organs.



GHS05 corrosion

Skin Corr. 1B H314 Causes severe skin burns and eye damage.

Eye Dam. 1 H318 Causes serious eye damage.



GHS07

Acute Tox. 4 H312 Harmful in contact with skin.

STOT SE 3 H335 May cause respiratory irritation.

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#### 2.2 Label elements

##### Labelling according to Regulation (EC) No 1272/2008

The product is classified and labelled according to the CLP regulation.

##### Hazard pictograms



GHS05 GHS07 GHS08

##### Signal word Danger

##### Hazard-determining components of labelling:

acetic acid  
N-methyl-2-pyrrolidone  
methanol

##### Hazard statements

H312 Harmful in contact with skin.  
H314 Causes severe skin burns and eye damage.  
H360D May damage the unborn child.  
H371 May cause damage to organs.  
H335 May cause respiratory irritation.

##### Precautionary statements

P303+P361+P353 IF ON SKIN (or hair): Take off immediately all contaminated clothing. Rinse skin with water [or shower].  
P305+P351+P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.  
P310 Immediately call a POISON CENTER/doctor.  
P321 Specific treatment (see on this label).  
P362+P364 Take off contaminated clothing and wash it before reuse.  
P405 Store locked up.  
P501 Dispose of contents/container in accordance with local/regional/national/international regulations.

##### 2.3 Other hazards

##### Results of PBT and vPvB assessment

- **PBT:** Not applicable.
- **vPvB:** Not applicable.

## SECTION 3: Composition/information on ingredients

#### 3.2 Chemical characterisation: Mixtures

• **Description:** Solvent mixture with additives

##### Dangerous components:

CAS: 64-19-7	acetic acid	50-100%
EINECS: 200-580-7	⚠ Flam. Liq. 3, H226; ⚠ Skin Corr. 1A, H314; ⚠ Acute Tox. 4, H312	
Reg.nr.: 01-2119475328-30-XXXX		
CAS: 872-50-4	N-methyl-2-pyrrolidone	10-25%
EINECS: 212-828-1	⚠ Repr. 1B, H360D; ⚠ Skin Irrit. 2, H315; Eye Irrit. 2, H319; STOT SE 3, H335	
Reg.nr.: 01-2119472430-46-XXXX		
CAS: 67-56-1	methanol	5-10%
EINECS: 200-659-6	⚠ Flam. Liq. 2, H225; ⚠ Acute Tox. 3, H301; Acute Tox. 3, H311; Acute Tox. 3, H331; ⚠ STOT SE 1, H370	
Reg.nr.: 01-2119433307-44-XXXX		

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**SVHC**

872-50-4 N-methyl-2-pyrrolidone

- Additional information:** For the wording of the listed hazard phrases refer to section 16.

### SECTION 4: First aid measures

**4.1 Description of first aid measures****General information:**

Immediately remove any clothing soiled by the product.

Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.

**After inhalation:**

Supply fresh air. If required, provide artificial respiration. Keep patient warm. Consult doctor if symptoms persist.

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

**After skin contact:** Immediately wash with water and soap and rinse thoroughly.**After eye contact:**

Rinse opened eye for several minutes under running water. Then consult a doctor.

**After swallowing:**

Call for a doctor immediately.

Drink plenty of water and provide fresh air. Call for a doctor immediately.

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

No further relevant information available.

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

No further relevant information available.

### SECTION 5: Firefighting measures

**5.1 Extinguishing media****Suitable extinguishing agents:**CO<sub>2</sub>, powder or water spray. Fight larger fires with water spray or alcohol resistant foam.**5.2 Special hazards arising from the substance or mixture**

No further relevant information available.

**5.3 Advice for firefighters**

- Protective equipment:** Mouth respiratory protective device.

### SECTION 6: Accidental release measures

**6.1 Personal precautions, protective equipment and emergency procedures**

Wear protective equipment. Keep unprotected persons away.

**6.2 Environmental precautions:**

Dilute with plenty of water.

Do not allow to enter sewers/ surface or ground water.

**6.3 Methods and material for containment and cleaning up:**

Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Use neutralising agent.

Dispose contaminated material as waste according to item 13.

Ensure adequate ventilation.

**6.4 Reference to other sections**

See Section 7 for information on safe handling.

See Section 8 for information on personal protection equipment.

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**SECTION 7: Handling and storage**

- **7.1 Precautions for safe handling**  
Ensure good ventilation/exhaustion at the workplace.  
Open and handle receptacle with care.  
Prevent formation of aerosols.
- **Information about fire - and explosion protection:**  
Keep ignition sources away - Do not smoke.  
Keep respiratory protective device available.
- **7.2 Conditions for safe storage, including any incompatibilities**
  - **Storage:**
  - **Requirements to be met by storerooms and receptacles:** No special requirements.
  - **Information about storage in one common storage facility:** Not required.
  - **Further information about storage conditions:** Keep container tightly sealed.
- **7.3 Specific end use(s)** No further relevant information available.

**SECTION 8: Exposure controls/personal protection**

- **8.1 Control parameters**
- **Additional information about design of technical facilities:** No further data; see item 7.
- **Ingredients with limit values that require monitoring at the workplace:**
  - 64-19-7 acetic acid**  
WEL Short-term value: 50 mg/m<sup>3</sup>, 20 ppm  
Long-term value: 25 mg/m<sup>3</sup>, 10 ppm
  - 872-50-4 N-methyl-2-pyrrolidone**  
WEL Short-term value: 80 mg/m<sup>3</sup>, 20 ppm  
Long-term value: 40 mg/m<sup>3</sup>, 10 ppm  
Sk
  - 67-56-1 methanol**  
WEL Short-term value: 333 mg/m<sup>3</sup>, 250 ppm  
Long-term value: 266 mg/m<sup>3</sup>, 200 ppm  
Sk
- **Additional information:** The lists valid during the making were used as basis.
- **8.2 Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**  
Keep away from foodstuffs, beverages and feed.  
Immediately remove all soiled and contaminated clothing  
Wash hands before breaks and at the end of work.  
Store protective clothing separately.  
Avoid contact with the eyes and skin.
- **Respiratory protection:**  
In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.
- **Protection of hands:**



Protective gloves

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

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

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

**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**

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

**SECTION 9: Physical and chemical properties****9.1 Information on basic physical and chemical properties****General Information****Appearance:****Form:**

Fluid

**Colour:**

Colourless

**Odour:**

Acrid

**Odour threshold:**

Not determined.

**pH-value:**

Not determined.

**Change in condition****Melting point/freezing point:**

Undetermined.

**Initial boiling point and boiling range:** Undetermined.**Flash point:**

Not applicable.

**Flammability (solid, gas):**

Not applicable.

**Ignition temperature:**

270 °C

**Decomposition temperature:**

Not determined.

**Auto-ignition temperature:**

Product is not selfigniting.

**Explosive properties:**

Product does not present an explosion hazard.

**Explosion limits:****Lower:**

1.3 Vol %

**Upper:**

17 Vol %

**Vapour pressure at 20 °C:**

16 hPa

**Density at 20 °C:**1.0243 g/cm<sup>3</sup>**Relative density**

Not determined.

**Vapour density**

Not determined.

**Evaporation rate**

Not determined.

**Solubility in / Miscibility with water:**

Fully miscible.

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- **Partition coefficient: n-octanol/water:** Not determined.
- **Viscosity:**
  - Dynamic:** Not determined.
  - Kinematic:** Not determined.
- **Solvent content:**
  - Organic solvents:** 98.2 %
  - Water:** 1.2 %
  - Solids content:** 0.6 %
- **9.2 Other information** No further relevant information available.

**SECTION 10: Stability and reactivity**

- **10.1 Reactivity** No further relevant information available.
- **10.2 Chemical stability**
- **Thermal decomposition / conditions to be avoided:**  
No decomposition if used according to specifications.
- **10.3 Possibility of hazardous reactions** No dangerous reactions known.
- **10.4 Conditions to avoid** No further relevant information available.
- **10.5 Incompatible materials:** No further relevant information available.
- **10.6 Hazardous decomposition products:** No dangerous decomposition products known.

**SECTION 11: Toxicological information**

- **11.1 Information on toxicological effects**
- **Acute toxicity**  
Harmful in contact with skin.
- **LD/LC50 values relevant for classification:**

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  - 64-19-7 acetic acid**
    - Oral LD50 3310 mg/kg (rat)
    - Dermal LD50 1060 mg/kg (rabbit)
  - 872-50-4 N-methyl-2-pyrrolidone**
    - Oral LD50 3914 mg/kg (rat)
    - Dermal LD50 8000 mg/kg (rabbit)
  - 67-56-1 methanol**
    - Oral LD50 100 mg/kg (rat)
    - Dermal LD50 300 mg/kg (rabbit)
    - Inhalative LC50/4 h 3 mg/l (rat)
- **Primary irritant effect:**
- **Skin corrosion/irritation**  
Causes severe skin burns and eye damage.
- **Serious eye damage/irritation**  
Causes serious eye damage.
- **Respiratory or skin sensitisation** Based on available data, the classification criteria are not met.
- **Additional toxicological information:**
- **CMR effects (carcinogenicity, mutagenicity and toxicity for reproduction)**
- **Germ cell mutagenicity** Based on available data, the classification criteria are not met.
- **Carcinogenicity** Based on available data, the classification criteria are not met.
- **Reproductive toxicity**  
May damage the unborn child.

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- **STOT-single exposure**  
May cause damage to organs.  
May cause respiratory irritation.
- **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.

### SECTION 12: Ecological information

- **12.1 Toxicity**
- **Aquatic toxicity:** No further relevant information available.
- **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:**
- **General notes:**  
Water hazard class 1 (German Regulation) (Self-assessment): slightly hazardous for water  
Do not allow undiluted product or large quantities of it to reach ground water, water course or sewage system.  
Must not reach sewage water or drainage ditch undiluted or unneutralised.
- **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**  
Must not be disposed together with household garbage. Do not allow product to reach sewage system.
- **Uncleaned packaging:**
- **Recommendation:** Disposal must be made according to official regulations.
- **Recommended cleansing agents:** Water, if necessary together with cleansing agents.

### SECTION 14: Transport information

- **14.1 UN-Number**  
**ADR, IMDG, IATA** UN2922
- **14.2 UN proper shipping name**  
**ADR** 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (ACETIC ACID, GLACIAL, METHANOL)  
CORROSIVE LIQUID, TOXIC, N.O.S. (ACETIC ACID, GLACIAL, METHANOL)
- **IMDG, IATA**
- **14.3 Transport hazard class(es)**
- **ADR**



- **Class** 8 Corrosive substances.

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• **Label** 8+6.1

• **IMDG**



• **Class** 8 Corrosive substances.  
• **Label** 8/6.1

• **IATA**



• **Class** 8 Corrosive substances.  
• **Label** 8 (6.1)  
• **14.4 Packing group** II  
• **ADR, IMDG, IATA** II  
• **14.5 Environmental hazards:**  
• **Marine pollutant:** No  
• **14.6 Special precautions for user** Warning: Corrosive substances.  
• **Hazard identification number (Kemler code):** 86  
• **EMS Number:** F-A,S-B  
• **Segregation groups** Acids  
• **Stowage Category** B  
• **Stowage Code** SW2 Clear of living quarters.  
• **14.7 Transport in bulk according to Annex II of Marpol and the IBC Code** Not applicable.  
• **Transport/Additional information:**

• **ADR**  
• **Limited quantities (LQ)** 1L  
• **Transport category** 2  
• **Tunnel restriction code** E  
• **UN "Model Regulation":** UN 2922 CORROSIVE LIQUID, TOXIC, N.O.S. (ACETIC ACID, GLACIAL, METHANOL), 8 (6.1), II

## SECTION 15: Regulatory information

- **15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture**
- **Directive 2012/18/EU**
- **Named dangerous substances - ANNEX I** None of the ingredients is listed.
- **REGULATION (EC) No 1907/2006 ANNEX XVII** Conditions of restriction: 3, 30, 69, 71, 72
- **DIRECTIVE 2011/65/EU on the restriction of the use of certain hazardous substances in electrical and electronic equipment – Annex II**  
None of the ingredients is listed.
- **National regulations:**
- **Other regulations, limitations and prohibitive regulations**
- **Substances of very high concern (SVHC) according to REACH, Article 57**

872-50-4 N-methyl-2-pyrrolidone

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- **15.2 Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

### SECTION 16: Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Relevant phrases**

- H225 Highly flammable liquid and vapour.
- H226 Flammable liquid and vapour.
- H301 Toxic if swallowed.
- H311 Toxic in contact with skin.
- H312 Harmful in contact with skin.
- H314 Causes severe skin burns and eye damage.
- H315 Causes skin irritation.
- H319 Causes serious eye irritation.
- H331 Toxic if inhaled.
- H335 May cause respiratory irritation.
- H360D May damage the unborn child.
- H370 Causes damage to organs.

- **Classification according to Regulation (EC) No 1272/2008**

The classification of the mixture is generally based on the calculation method using substance data according to Regulation (EC) No 1272/2008.

- **Department issuing SDS:** product safety department

- **Contact:** msds@scharlab.com

- **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 Organisation  
ADR: Accord relatif au transport international 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 Harmonised System of Classification and Labelling of Chemicals  
EINECS: European Inventory of Existing Commercial Chemical Substances  
ELINCS: European List of Notified Chemical Substances  
CAS: Chemical Abstracts Service (division of the American Chemical Society)  
LC50: Lethal concentration, 50 percent  
LD50: Lethal dose, 50 percent  
PBT: Persistent, Bioaccumulative and Toxic  
SVHC: Substances of Very High Concern  
vPvB: very Persistent and very Bioaccumulative  
Flam. Liq. 2: Flammable liquids – Category 2  
Flam. Liq. 3: Flammable liquids – Category 3  
Acute Tox. 3: Acute toxicity – Category 3  
Acute Tox. 4: Acute toxicity – Category 4  
Skin Corr. 1A: Skin corrosion/irritation – Category 1A  
Skin Corr. 1B: Skin corrosion/irritation – Category 1B  
Skin Irrit. 2: Skin corrosion/irritation – Category 2  
Eye Dam. 1: Serious eye damage/eye irritation – Category 1  
Eye Irrit. 2: Serious eye damage/eye irritation – Category 2  
Repr. 1B: Reproductive toxicity – Category 1B  
STOT SE 1: Specific target organ toxicity (single exposure) – Category 1  
STOT SE 2: Specific target organ toxicity (single exposure) – Category 2  
STOT SE 3: Specific target organ toxicity (single exposure) – Category 3

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**Annex: Exposure scenario****Description of the activities / processes covered in the Exposure Scenario**

See section 1 of the annex to the Safety Data Sheet.

**2 - Conditions of use****Duration and frequency** 5 workdays/week.**Physical parameters****Physical state** Fluid**Concentration of the substance in the mixture** The substance is main component.**Other operational conditions****Other operational conditions affecting environmental exposure** No special measures required.**Other operational conditions affecting worker exposure**

Avoid contact with eyes.

Avoid contact with the skin.

Do not breathe gas/vapour/aerosol.

**Other operational conditions affecting consumer exposure** No special measures required.**Other operational conditions affecting consumer exposure during the use of the product**

Not applicable.

**Risk management measures****Worker protection****Organisational protective measures** No special measures required.**Technical protective measures**

Ensure that suitable extractors are available on processing machines

**Personal protective measures**

Do not inhale gases / fumes / aerosols.

Avoid contact with the skin.

Avoid contact with the eyes.

Tightly sealed goggles

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use self-contained respiratory protective device.

Protective gloves

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

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

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

Pregnant women should strictly avoid inhalation or skin contact.

**Measures for consumer protection** Ensure adequate labelling.**Environmental protection measures****Water**

Generally, prior to the introduction of wastewater into wastewater treatment plants a neutralisation is required.

**Disposal measures**

Disposal must be made according to official regulations.

Ensure that waste is collected and contained.

**Disposal procedures**

Must not be disposed together with household garbage. Do not allow product to reach sewage system.

**Waste type** Partially emptied and uncleaned packaging**3 - Exposure estimation****Consumer** Not relevant for this Exposure Scenario.**4 - Guidance for downstream users** No further relevant information available.