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Société Anonyme à directoire et conseil de surveillance au capital de 3.108.285,50€ - RCS Alençon - SIREN 352 600 209 - Code APE 3250 A - TVA Intracom FR 22 352 600

Material Safety Data Sheet
EASYCLEAN

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Common name **EasyClean**
Material use To clean flow cytometer
Catalog codes : Refer to IMV Technologies catalogue
Manufacturer : IMV Technologies
ZI N°1 61302 Saint Ouen sur Iton France
TEL : +33 (0) 2 33 34 64 64 www.imv-technologies.com

In case of emergency : CHEMTREC, U.S. Domestic: (800) 424-9300
CHEMTREC, International: 1-703-527-3887 or I.N.R.S +33. 1.45.42.59.59

Section 2. COMPOSITION AND INFORMATION ON INGREDIENTS

Preparation:

Ingredient	Cas#	Concentration % by weight	Classification
Sodium Hypochlorite	7681-52-9	2.5%	C-N / R31 – R34 – R50
Sodium Hydroxide	1310-73-2	<0,5%	C / R35 – S26 – S37/39 – S45

3. HAZARDS IDENTIFICATION

The solution is irritant for eyes and skin, can liberate a toxic gas in contact with acid:

This product is classified according to the EU directive 67/548/EEC or 1999/45/EC,
Cause severe burns

Is classified according to regulation (EC) N° 1272/2008 (EU-GHS/CLP)
Skin corrosion

Important hazards May cause irritation or burns through skin-, eye-, contact.

4. FIRST AID MEASURES

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
Take off contaminated clothing and shoes immediately. 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
Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water. Provide rest, half-sitting position, Consult a physician.

Most important symptoms and effects, both acute and delayed
Spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin.

Indication of any immediate medical attention and special treatment needed
No data available

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5. FIRE FIGHTING MEASURES

5.1 Extinguishing media

Suitable extinguishing media: Water, CO2, foam, dry chemical, earth or sand.

Unusual Fire / Explosion Hazards:Cool down the containers if possible by spraying water

Individual protection: use an approved/ certified respirator or equivalent

5.2 Special hazards arising from the substance or mixture

Sodium oxides

5.3 Advice for firefighters

Wear self contained breathing apparatus for firefighting if necessary.

5.4 Further information

The product itself does not burn.

6. ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Use personal protective equipment. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust. Wear protective glasses, gloves, boots.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3 Methods and materials for containment and cleaning up

Pick up and arrange disposal without creating dust. Sweep up and shovel. Keep in suitable, closed containers for disposal.

Small Spill:

Dilute with water and mop up, or absorb with an inert dry material and place in an appropriate waste disposal container.

Large Spill:

Corrosive liquid. Oxidizing material. Stop leak if without risk. Absorb with DRY earth, sand or other non-combustible material. Do not get water inside container. Avoid contact with a combustible material (wood, paper, oil, clothing...). Keep substance damp using water spray. Do not touch spilled material. Use water spray curtain to divert vapor drift. Prevent entry into sewers, basements or confined areas; dike if needed. Call for assistance on disposal. Be careful that the product is not present at a concentration level above TLV. Check TLV on the MSDS and with local authorities.

6.4 Reference to other sections

For disposal see section 13.

7. HANDLING AND STORAGE

7.1 Precautions for safe handling

Avoid formation of dust and aerosols.

Provide appropriate exhaust ventilation at places where dust is formed.

Keep locked up. Keep container dry. Keep away from heat. Keep away from sources of ignition. Keep away from combustible material. Do not ingest. Do not breathe gas/fumes/vapor/spray. Never add water to this product. In case of insufficient ventilation, wear suitable respiratory equipment. If ingested, seek medical advice immediately and show the container or the label. Avoid contact with skin and eyes. Keep away from incompatibles such as reducing agents, combustible materials, organic materials, metals, acids.

7.2 Conditions for safe storage, including any incompatibilities

Keep container tightly closed. Keep container in a dry, cool, well-ventilated area. Separate from acids, alkalies, reducing agents and combustibles. See NFPA 43A, Code for the Storage of Liquid and Solid Oxidizers. Air Sensitive to light. Store in light-resistant containers.

7.3 Specific end uses

No data available.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

8.1 Control parameters

Components with workplace control parameters.

8.2 Exposure controls

Appropriate engineering controls

Handle in accordance with good industrial hygiene and safety practice. Wash hands before breaks and at the end of workday.

Personal protective equipment

Protective lab coat. Safety shoes. Mask.

Eye/face protection

Face shield and safety glasses. Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices.Wash and dry hands.

The selected protective gloves have to satisfy the specifications of EU Directive 89/686/EEC and the standard EN 374 derived from it.

Immersion protection

Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: > 480 min
Material tested:Dermatril® (Aldrich Z677272, Size M)

Splash protection
Material: Nitrile rubber
Minimum layer thickness: 0,11 mm
Break through time: > 30 min
Material tested: Dermatril® (Aldrich Z677272, Size M)
Data source: KCL GmbH, D-36124 Eichenzell, phone +49 (0)6659 873000, e-mail sales@kcl.de, test method: EN374

If used in solution, or mixed with other substances, and under conditions which differ from EN 374, contact the supplier of the CE approved gloves. This recommendation is advisory only and must be evaluated by an Industrial Hygienist familiar with the specific situation of anticipated use by our customers. It should not be construed as offering an approval for any specific use scenario.

Respiratory protection

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

Where risk assessment shows air-purifying respirators are appropriate use a full-face particle respirator type N100 (US) or type P3 (EN 143) respirator cartridges as a backup to engineering controls. If the respirator is the sole means of protection, use a full-face supplied air respirator. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Personal Protection in Case of a Large Spill

Splash goggles. Full suit. Vapor respirator. Boots. Gloves. A self contained breathing apparatus should be used to avoid inhalation of the product. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

Exposure Limits

Sodium hypochlorite TWA: 1 CEIL: 1 (ppm as Cl2) STEL: 1 (ppm as Cl2) from ACGIH (TLV) [United States] Sodium hydroxide STEL: 2 (mg/m3) from ACGIH (TLV) [United States] TWA: 2 CEIL: 2 (mg/m3) from OSHA (PEL) [United States] CEIL: 2 (mg/m3) from NIOSH Consult local authorities for acceptable exposure limits.

9. PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

a) Appearance Form:	Liquid
Colour:	Transparent
b) Odour Characteristic.	Chlorine-like (Slight.)
Taste :	Not available
Molecular Weight:	Not applicable.
c) pH	12
d) Melting point/freezing point	
Melting point/range:	Not available
e) Initial boiling point and boiling range	Not available
f) Flash point	Not applicable
g) Evaporation rate	No data available
h) Flammability (solid, gas)	No data available
i) Upper/lower flammability or explosive limits	No data available
j) Vapour pressure	No data available
k) Vapour density	No data available
l) Relative density	1190 kg/m3
m) Water solubility	No data available
n) Partition coefficient: noctanol/water	No data available
o) Autoignition temperature:	No data available
p) Decomposition temperature:	No data available
q) Viscosity:	No data available
r) Explosive properties:	No
s) Oxidizing properties:	No data available

9.2 Other safety information

Bulk density	2.130 kg/m3

10. STABILITY AND REACTIVITY

10.1 Reactivity
Decomposed by carbon dioxide from air. Slowly decomposes on contact with air. Unstable in air unless mixed with sodium hydroxide. Incompatible with ammonium acetate, ammonium carbonate, ammonium nitrate, ammonium oxalate, and ammonium phosphate. Decompostion of sodium hypochlorite takes place within a few seconds with these salts. Also incompatible with primary amines, phenyl acetonitrile, ethyleneimine, methanol, acidified benzyl cyanide, formic acid, urea, nitro compounds, methylscellulose, celloluse, aziridine, ether, ammonia. Mixing this product with chemicals (e.g. ammonia, acids, detergents, etc.) or organic matter (e.g. urine, feces, etc.) will release chlorine gas. Chloramine gas may be evolved when ammonia and bleach are mixed. Decomposed by hot water. Sensitive to light. Exposure to light accelerates decompositon.

10.2 Chemical stability
No data available.

10.3 Possibility of hazardous reactions
No data available.

10.4 Conditions to avoid
No data available.

10.5 Incompatible materials
Strong oxidizing agents, Strong acids, Organic materials.
Reactive with reducing agents, combustible materials, organic materials, metals, acids.
Extremely corrosive in presence of aluminum. Corrosive in presence of stainless steel(304), of stainless steel(316). Non corrosive in presence of glass.

10.6 Hazardous decomposition products
Other decomposition products - no data available

10.7 Special Remarks on Corrosivity
Sodium Hypochlorite is extremely corrosive to brass, and moderately corrosive to bronze. There is no corrosivity information for copper.

11. TOXICOLOGICAL INFORMATION

Information on toxicological effects
Routes of Entry: Absorbed through skin. Eye contact. Inhalation. Ingestion.
Acute toxicity
no data available
Skin corrosion/irritation
Skin - rabbit - Causes severe burns. - 24 h
Serious eye damage/eye irritation
Eyes - rabbit - Severe eye irritation - 24 h
Respiratory or skin sensitization
no data available
Germ cell mutagenicity
no data available
Carcinogenicity
No data available for the mixture.
Separate toxicity :
Sodium hydroxide : Contains material which may cause damage to the following organs: lungs, mucous membranes, skin, eyes.
Sodium Hypochlorite : CARCINOGENIC EFFECTS: CARCINOGENIC EFFECTS: Classified 3 (Not classifiable for human.) by IARC [Sodium hypochlorite]. MUTAGENIC EFFECTS: Mutagenic for bacteria and/or yeast. [Sodium hypochlorite]. Mutagenic for mammalian somatic cells.
Reproductive toxicity
no data available
Specific target organ toxicity - single exposure
no data available
Specific target organ toxicity - repeated exposure
no data available
Aspiration hazard
no data available

Potential health effects
Inhalation May be harmful if inhaled. Material is extremely destructive to the tissue of the mucous membranes and upper respiratory tract.
Ingestion May be harmful if swallowed. Causes burns.
Skin May be harmful if absorbed through skin. Causes skin burns (corrosive).

Eyes Causes eye burns (corrosive).
Special Remarks on other Toxic Effects on Humans:
Potential Health Effects: Can cause severe irritation and possible burns to skin and eyes. Eye contact may also cause corneal and conjunctival edema, conjunctival hemorrhages. Contact with skin may also cause vesicular eruptions and eczematoid dermatitis which becomes evident upon re-exposure. Prolonged or repeated eye contact may cause conjunctivitis. Ingestion can cause burns to the digestive tract. Symptoms may include: 1. pain and inflammation of the mouth, pharynx, esophagus, and stomach, 2. erosion of the mucous membranes (chiefly of the stomach), nausea, vomiting, choking, coughing, hemorrhage, 3. circulatory collapse with cold and clammy skin (due to methemoglobinemia), cyanosis, and shallow respirations, 4. confusion, delirium, coma, 5. edema of the pharynx, glottis, larynx with stridor and obstruction, 6. Perforation of the esophagus, or stomach, with mediastinitis or peritonitis. Inhalation causes slight to severe respiratory tract irritation and delayed pulmonary edema. Prolonged or repeated inhalation may cause allergic respiratory reaction (asthma). 7. spasm, inflammation and edema of the larynx, spasm, inflammation and edema of the bronchi, pneumonitis, pulmonary edema, burning sensation, Cough, wheezing, laryngitis, Shortness of breath, Headache, Nausea, Vomiting, Material is extremely destructive to tissue of the mucous membranes and
upper respiratory tract, eyes, and skin.

Additional Information
RTECS: WB4900000

12. ECOLOGICAL INFORMATION

12.1 Toxicity
Toxicity to fish LC50 - Gambusia affinis (Mosquito fish) – not available
Toxicity to daphnia and other aquatic invertebrates
Immobilization EC50 - Daphnia – Not available

12.2 Persistence and degradability
No data available.

12.3 Bioaccumulative potential
No data available.

12.4 Mobility in soil
No data available.

12.5 Results of PBT and vPvB assessment
No data available.

12.6 Other adverse effects
Harmful to aquatic life.

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

DOT Classification: Class 8: Corrosive material
Identification: : Hypochlorite solution UNNA: 1791 PG: III
Special Provisions for Transport: Not available.

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15. REGULATORY INFORMATION

This safety datasheet complies with the requirements of Regulation (EC) No. 1907/2006.

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

No data available

15.2 Chemical Safety Assessment

No data available

16. OTHER INFORMATION

Further information

Created : 16/05/2012
Last updated : 16/05/2012

The above information is believed to be correct but does not purport to be all inclusive and shall be used only as a guide. The information in this document is based on the present state of our knowledge and is applicable to the product with regard to appropriate safety precautions. It does not represent any guarantee of the properties of the product. IMV Technologies shall not be held liable for any damage resulting from handling or from contact with the above product.

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