

MATERIAL SAFETY DATA SHEET

Based on REACH-regulation (EC) 1907/2006

Intra Hydro pure

SECTION 1: IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND COMPANY

1.1 Product identifier	Intra Hydro pure
1.2 Intended use	Cleaning and disinfection agent
1.3 Supplier details	Intracare B.V. Voltaweg 4 5466 AZ Veghel Nederland Tel.: +31-413-354105 Fax.: +31-413-362324 info@intracare.nl
1.4 Emergency telephone number	+31 613 942 297 C. Vulders - Intracare B.V. (NL) +44 1235 239 670 Carechem 24h International (Europe)

SECTION 2: HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

Classification in accordance with Regulation (EU) 1272/2008 (CLP)

Acute toxicity; Category 4; Harmful if swallowed (H302).

Skin Irritation; Category 2; Causes skin irritation (H315).

Serious eye damage; Category 1; Causes serious eye damage (H318).

Specific target organ toxicity – single exposure; Category 3; May cause respiratory irritation (H335).

2.2 Label elements

Labeling in accordance with Regulation (EU) 1272/2008 (CLP)



Hazard pictograms:

Signal word: Danger

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Hazard statements:

H302	Harmful if swallowed.
H315	Causes skin irritation.
H318	Causes serious eye damage.
H335	May cause respiratory irritation.

Precautionary statements:

Prevention:

P261	Avoid breathing dust/fume/gas/mist/vapors/spray.
P280	Wear protective gloves / protective clothing / eye protection / face protection.

Response:

P301+P312	IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell
P302+P352	IF ON SKIN: Wash with plenty of soap and water.
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 cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P403 + P233	Store in a well-ventilated place. Keep container tightly closed.

Hazardous components which must be listed on the label:

- Hydrogen Peroxide 7722-84-1

2.3 Other Hazards

Physical/Chemical Hazard: Risk of decomposition on heating. Risk of decomposition in contact with incompatible products: metal oxides, metal ions (e.g. Mn, Fe, Cu, Ni, Cr, Zn), metal salts, bases and reducing agents. Sustains the combustion of combustible materials.

SECTION 3: COMPOSITION / INFORMATION ON INGREDIENTS

3.1 Substances

Chemical name	Concentration	CAS no.	EINECS no.
Hydrogen peroxide	< 50%	7722-84-1	231-765-0

Classification of the dangerous substances:

Hydrogen peroxide < 50%	Acute toxicity; Cat. 4; Harmful if swallowed (H302). Skin Irritation; Cat. 2; Causes skin irritation (H315). Serious eye damage; Cat. 1; Causes serious eye damage (H318). Specific target organ toxicity - single exposure; Cat. 3; May cause respiratory irritation (H335).
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SECTION 4: FIRST AID MEASURES

4.1 Description of first aid measures

Inhalation

Remove from exposure, lie down. Keep warm. Oxygen or artificial respiration if needed. Call a physician immediately.

Skin contact

Wash off immediately with plenty of water removing all contaminated clothes and shoes. Wash contaminated clothing with plenty of water to prevent fire hazard. Keep warm. If skin irritation persists, call a physician.

Eye contact

Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Consult a physician.

Ingestion

Rinse mouth. Give small amounts of water to drink. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Keep warm. Call a physician immediately.

4.2 Most important symptoms and effects

Irritant for skin and eyes.

4.3 Indication of any immediate medical attention and special treatment

Symptomatic treatment.

SECTION 5: FIREFIGHTING MEASURES

5.1 Extinguishing media

Use: water, water mist. The product itself does not burn.

Do not use: drying powder, carbon dioxide (CO₂).

5.2 Special hazards arising from the substance or mixture

In case of fire, hydrogen can generate oxygen what can contribute to the intensity of the fire. The product itself does not burn but it sustains the combustion of combustible material. Risk of explosion if mixed with combustible material. Pressure build-up in confined space (risk of decomposition).

5.3 Advice for firefighters

Self-contained breathing apparatus (EN 133). Complete suit protecting against chemicals.

5.4 Specific methods

Cool containers / tanks with water spray.



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SECTION 6: ACCIDENTAL RELEASE MEASURES

6.1 Personal precautions, protective equipment and emergency procedures

Avoid contact with skin, eyes and clothing. Never return spills in original containers for re-use. Ensure adequate ventilation. Wear personal protective equipment. Remove all sources of ignition. Keep people away from and upwind of spill/leak.

6.2 Environmental precautions

Prevent product from entering drains. Should not be released into the environment.

6.3 Methods and materials for containment and cleaning up

Prevent from spreading. Dam up. Very dilute solution can be washed into drains with plenty of water. Contact the proper local authorities. Never return spills in original containers for re-use.

6.4 Reference to other sections

n.a.

SECTION 7: HANDLING AND STORAGE

7.1 Precautions for safe handling

Never return unused material to storage receptacle. Open drum carefully as content may be under pressure. Avoid exposure. Ensure adequate ventilation, especially in confined areas. Wear suitable protective clothing. Keep away from sources of ignition - No smoking. Keep away from combustible material. Protect from contamination.

7.2 Conditions for safe storage, including any incompatibilities

Keep in a cool, well-ventilated place. Keep away from heat and sources of ignition. Condition of containers should be checked regularly. Store in original container. Store in a receptacle equipped with a vent.

Materials to avoid: combustible material, reducing agents, organic materials, bases, metal oxides, metal ions (e.g. Mn, Fe, Cu, Ni, Cr, Zn), metal salts, rust, dirt.

7.3 Specific end uses

When using the product in a (drinking) water pipeline, ensure proper ventilation to avoid buildup of pressure.

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SECTION 8: EXPOSURE CONTROLS / PERSONAL PROTECTION

8.1 Control parameters

DNEL hydrogen peroxide: MAC-value 1 ppm 1,4 mg/m³ (human, inhalation, lon-term)

PNEC hydrogen peroxide: 0.0126 mg/l (fresh water)

PNEC hydrogen peroxide: 0.0126 mg/l (marine water)

PNEC hydrogen peroxide: 0.0023 mg/kg (soil)

PNEC hydrogen peroxide: 4.66 mg/l (STP)

8.2 Exposure controls

Avoid exposure. Ensure proper ventilation. Read the MSDS/label of the product before use. Keep running water within arm reach. Use personal protection (see below).

Respiratory protection Ensure proper ventilation. In case of spraying / fogging, use respiratory protection (e.g. filter ABEK-P3).

Skin protection Use gloves, e.g.:
Butyl rubber, penetration time > 480 min, width 0.7 mm;
Natural rubber, penetration time > 480 min, width 1 mm;
Nitrile rubber, penetration time > 480 min, width 0.33 mm;

Eye protection Wear suitable, well-fitting safety goggles and face field (EN 166).

SECTION 9: PHYSICAL AND CHEMICAL PROPERTIES

9.1 Information on basic physical and chemical properties

Physical state: Liquid
Color: Colorless
Odor: Pungent
pH (100%): < 1.5
Freezing point: -52 °C
Boiling point / range: 114 °C
Flash point Not flammable
Evaporation rate: > 1 (n-butyl acetate = 1)
Lower explosion limit: n.a.
Upper explosion limit: n.a.
Vapor pressure: 299 Pa (by 20 °C)
Relative vapor density: Not known
Density: 1195 kg/m³ (by 20 °C)
Solubility in water: Completely soluble
Solubility in fat: n.a.

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Part. coeff. n/octanol/water: Log P_{ow}: -1.57
Thermal decomposition: -
Viscosity (dynamic): < 20 mPa·s
Oxidizing: May intensify fire; oxidizer (50-70%)

9.2 Other data

Surface tension: Not determined

SECTION 10: STABILITY AND REACTIVITY

10.1 Reactivity

Danger of decomposition when in contact with avoidable substances. Danger of explosion in closed systems as result of pressure buildup. Danger of decomposition upon heating.

10.2 Chemical stability

The product is stabilized. It decomposes upon heating.

10.3 Possibility of hazardous reactions

See section 10.1.

10.4 Conditions to avoid

High temperatures. UV light. Protect from contamination.

10.5 Incompatible materials

Materials to avoid: combustible material, reducing agents, organic materials, bases, metal oxides, metal ions (e.g. Mn, Fe, Cu, Ni, Cr, Zn), metal salts, rust, dirt.

10.6 Hazardous decomposition products

Decomposes into oxygen and water. Vapor may originate during decomposition.

SECTION 11: TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects

Inhalation: Pungent / irritation. Irritation of mucous membranes, lung oedema.

Skin contact: Corrosive. Red-ness. White-ness (oxygen emphysema).

Eye contact: Causes damage to eyes and cornea.

Swallowing: Corrosive. Bleeding of mucous membranes up to severe damage to organs.

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Sensibilisation: Not sensitizing.

Of hydrogen peroxide the following toxicity is available:

LD₅₀ (rat, oral): >500 mg/kg (50% concentration)
LC₅₀ (rat, inhalation, 4h): 2000 mg/m³
LD₅₀ (rat, dermal): >4000 mg/kg (50% concentration)

SECTION 12: ECOLOGICAL INFORMATION

12.1 Ecotoxiciteitseffecten

Aquatic toxicity

LC₅₀/96 h/Pimephales promelas: 22 - 33 mg/l
LC₅₀/48 h/ Leuciscus idus: 35 mg/l
EC50/ Daphnia: 2.4 – 7.7 mg/l

Toxicity to other organisms

EC50/30 min/activated sludge/Respiratory inhibition of activated sludge/OECD test guideline 209:
466 mg/l.
EC50/3 h/activated sludge/Respiratory inhibition of activated sludge/OECD test guideline 209:
> 1 000 mg/l.

12.2 Persistence and degradability

Biological degradability:

Hydrogen peroxide is readily biodegradable.

Chemical degradation:

Decomposes into oxygen and water.

12.3 Bio-accumulative potential

Bioaccumulation is unlikely, given the low partition coefficient n-octanol/water (see SECTION 9).

12.4 Mobility in soil

See vapor pressure and solubility in water in SECTION 9. However, hydrogen peroxide will react directly when in contact with organic materials.

12.5 Results of PBT- and vPvB assessment

Hydrogen peroxide is not considered to be persistent, bio-accumulating and toxic (PBT).
Hydrogen peroxide is not considered to be very persistent and very bio-accumulating (vPvB).

12.6 Other adverse effects

No data available.



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SECTION 13: DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	The product can be used completely. Rinse empty packaging with water prior to disposal. The rest of the product can be flushed away with much water.
Packaging	The product will be delivered in a polyethylene can. After use the rinsed packaging can be treated as normal waste.
National authorities	Remainder of this product is chemical waste: see BAGA; STb. 617 (1993).

SECTION 14: TRANSPORT INFORMATION

14.1 UN-number: 2014

Land transport (RID/ADR)

14.2 Proper shipping name: UN 2014 Hydrogen peroxide, aqueous solution, 5.1 (8), II
14.3 Transport hazard class: 5.1
14.4 Packing group: II
Classification code: 58
ADR/RID-labels: 5.1, 8
Tunnel restriction code: E

Land transport (TDG)

14.2 Proper shipping name: UN 2014 Hydrogen peroxide, aqueous solution, 5.1 (8), II
14.3 Transport hazard class: 5.1
14.4 Packing group: II
Classification code: 58
ADR/RID-labels: 5.1, 8
Tunnel restriction code: E

Water transport (ADNR)

14.2 Proper shipping name: UN 2014 Hydrogen peroxide, aqueous solution, 5.1 (8), II
14.3 Transport hazard class: 5.1
14.4 Packing group: II
14.5 Environmental hazards: Not a marine pollutant
IMDG-labels: 5.1, 8
EMS-number: 5.1 - 03
MFAG-number: 735

Sea transport (IMDG)



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14.2 Proper shipping name: UN 2014 Hydrogen peroxide, aqueous solution, 5.1 (8), II

14.3 Transport hazard class: 5.1

14.4 Packing group: II

14.5 Environmental hazards: Not a marine pollutant

IMDG-labels: 5.1, 8

EMS-number: 5.1 - 03

MFAG-number: 735

Air transport (ICAO/IATA)

General: IATA prohibits air cargo transport

14.8 Special precautions for user

None known.

SECTION 15: REGULATORY INFORMATION

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

The safety information of this MSDS is based on Regulation (EU) 1272/2009 (CLP).

15.2 Chemical Safety Assessment

The chemical safety is based on the registration of this product and general safety information of Hydrogen Peroxide 50%.

SECTION 16: OTHER INFORMATION

This information only concerns the above mentioned product and does not need to be valid if used with other product(s) or in any process. The information is correct and complete to our best present knowledge and is given in good faith but without warranty. It remains the user's own responsibility to make sure that the information is appropriate and complete for his special use of this product. It is recommended that the information of this safety data sheet is handed to all personnel.

Education advice: For professional use only. Always read the label and MSDS before use.

Sources used: Regulations, databases, literature, studies.

History/revisions: See footnote of this document.