Huwa-San TR-50

Safety Data Sheet

according to Regulation (EC) No. 453/2010

Date of issue: 23/10/2013 Revision date: 17/03/2020 Supersedes: 05/03/2020 Version: 2.4

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product form : Mixture

Trade name : Huwa-San TR-50

CAS No : 7722-84-1

Synonyms : Stabilized hydrogen peroxide

Product group : Trade product

1.2. Relevant identified uses of the substance or mixture and uses advised against

1.2.1. Relevant identified uses

Main use category : Industrial use

Function or use category : Disinfectant.

1.2.2. Uses advised against

No additional information available

1.3. Details of the supplier of the safety data sheet

ROAM TECHNOLOGY NV
I.Z. Poort Genk 6835, Geleenlaan 24
3600 Genk / Belgium
T +32 89 44 00 42
info@roamtechnology.com - www.roamtechnology.com

1.4. Emergency telephone number

Country	Organisation	Adresse	Emergency Number
UNITED KINGDOM	NPIS (National Poisons Information Service)	-	+44 844 892 0111 111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

Classification according to Regulation (EC) No. 1272/2008 [CLP]

Acute Tox. 4 (Oral)	H302
Skin Irrit. 2	H315
Eye Dam. 1	H318
STOT SE 3	H335
Aquatic Chronic 3	H412

Full text of H-phrases: see section 16

Adverse physicochemical, human health and environmental effects

No additional information available

2.2. Label elements

Labelling according to Regulation (EC) No. 1272/2008 [CLP]

Hazard pictograms (CLP) :



GHS05



GHS07

CLP Signal word : Danger

Hazardous ingredients : hydrogen peroxide solution ... %

Hazard statements (CLP) : H302 - Harmful if swallowed
H315 - Causes skin irritation
H318 - Causes serious eye damage
H335 - May cause respiratory irritation
H412 - Harmful to aquaticlife with long lasting effects

Precautionary statements (CLP)	:	P261 - Avoid breathing dust/fume/gas/mist/vapours/spray P264 - Wash ... thoroughly after handling P270 - Do not eat, drink or smoke when using this product P271 - Use only outdoors or in a well-ventilated area P280 - Wear protective gloves/protective clothing/eye protection/face protection P301+P312 - IF SWALLOWED: Call a POISON CENTER/doctor/… if you feel unwell P302+P352 - IF ON SKIN: Wash with plenty of water/… P304+P340 - IF INHALED: Remove person to fresh air and keep 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 P310 - Immediately call a POISON CENTER/doctor/… P312 - Call a POISON CENTER/doctor/… if you feel unwell P321 - Specific treatment (see ... on this label) P330 - Rinse mouth P332+P313 - If skin irritation occurs: Get medical advice/attention P362+P364 - Take off contaminated clothing and wash it before reuse P403+P233 - Store in a well-ventilated place. Keep container tightly closed P405 - Store locked up P501 - Dispose of contents/container to ...

2.3. Other hazards

Other hazards not contributing to the classification	:	Danger of decomposition under influence of heat. Maintains combustion of flammable substances. Risk of decomposition in contact with non-tolerant materials (metal oxides, metal ions, metal salts, bases, reducing agents).

SECTION 3: Composition/information on ingredients

3.1. Substance

Not applicable

3.2. Mixture

Name	Product identifier	%	Classification according to Regulation (EC) No. 1272/2008 [CLP]
hydrogen peroxide solution ... %	(CAS No) 7722-84-1 (EC no) 231-765-0 (EC index no) 008-003-00-9 (REACH-no) 01-2119485845-22	49 - 49,9	Ox. Liq. 1, H271 Acute Tox. 4 (Oral), H302 Acute Tox. 4 (Inhalation:dust,mist), H332 Skin Corr. 1A, H314 STOT SE 3, H335

Name	Product identifier	Specific concentration limits
hydrogen peroxide solution ... %	(CAS No) 7722-84-1 (EC no) 231-765-0 (EC index no) 008-003-00-9 (REACH-no) 01-2119485845-22	(5 =< C < 8) Eye Irrit. 2, H319 (8 =< C < 50) Eye Dam. 1, H318 (35 =< C) STOT SE 3, H335 (35 =< C < 50) Skin Irrit. 2, H315 (50 =< C < 70) Skin Corr. 1B, H314 (50 =< C < 70) Ox. Liq. 2, H272 (70 =< C) Skin Corr. 1A, H314 (70 =< C) Ox. Liq. 1, H271

Full text of H-phrases: see section 16

SECTION 4: First aid measures

4.1. Description of first aid measures

First-aid measures general	:	Respiratory arrest: artificial respiration or oxygen. Prevent cooling by covering the victim (no warming up). Depending on the victim's condition: doctor/hospital. Never give anything by mouth to an unconscious person.
First-aid measures after inhalation	:	Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Respiratory arrest: artificial respiration or oxygen.
First-aid measures after skin contact	:	Wash immediately with lots of water. Take victim to a doctor if irritation persists. Wash contaminated clothing before reuse.
First-aid measures after eye contact	:	Rinse immediately with plenty of water for 15 minutes. Do not apply neutralizing agents. Take victim to an ophthalmologist. Remove contact lenses, if present and easy to do. Continue rinsing.
First-aid measures after ingestion	:	Rinse mouth with water. If swallowed, seek medical advice immediately and show this container or label. Give nothing or a little water to drink. Do NOT induce vomiting.

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

Symptoms/injuries after inhalation	:	Headache. Cough. Nausea. Slight irritation. Vomiting. May cause respiratory irritation. Dizziness.
Symptoms/injuries after skin contact	:	Caustic burns/corrosion of the skin. Paleness. Causes skin irritation.
Symptoms/injuries after eye contact	:	Corrosion of the eye tissue. Permanent eye damage. Causes serious eye damage.
Symptoms/injuries after ingestion	:	Burns to the gastric/intestinal mucosa. Abdominal pain. Dizziness. Headache. Disturbances of consciousness. Vomiting.

Chronic symptoms : ON CONTINUOUS/REPEATED EXPOSURE/CONTACT: Dry/sore throat. Irritation of the eye tissue.

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

No additional information available

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media : Preferably: quantities of water. Water spray. Sand.

Unsuitable extinguishing media : Dry chemical powder. No carbon dioxide.

5.2. Special hazards arising from the substance or mixture

Fire hazard : Explosive when mixed with combustible material. Risk of overpressure and burst due to decomposition in confined spaces and pipes. Maintains combustion of flammable substances. Promotes combustion. Reactions involving a fire hazard: see "Reactivity Hazard".

Explosion hazard : INDIRECT EXPLOSION HAZARD. Heat may cause pressure rise in tanks/drums: explosion risk. Reactions with explosion hazards: see "Reactivity Hazard".

5.3. Advice for firefighters

Precautionary measures fire : Exposure to fire/heat: keep upwind. Exposure to fire/heat: have neighbourhood close doors and windows.

Firefighting instructions : Cool tanks/drums with water spray/remove them into safety. Use water spray or fog for cooling exposed containers. Wear respiratory protection.

Protection during firefighting : Heat/fire exposure: compressed air/oxygen apparatus. Do not enter fire area without proper protective equipment, including respiratory protection.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

6.1.1. For non-emergency personnel

Protective equipment : Gloves. Face-shield. Protective clothing.

Emergency procedures : Inform the public about the hazard and give advice to keep upwind. Remove all sources of ignition. Keep containers closed. Wear recommended personal protective equipment. Ensure adequate air ventilation. Avoid contact with skin, eyes and clothing.

6.1.2. For emergency responders

Protective equipment : Equip cleanup crew with proper protection.

Emergency procedures : Ventilate area.

6.2. Environmental precautions

Prevent spreading in sewers. Prevent entry to sewers and public waters. Notify authorities if liquid enters sewers or public waters.

6.3. Methods and material for containment and cleaning up

For containment : Dam up the liquid spill.

Methods for cleaning up : Dilute directly spill with plenty of water . Take up liquid spill into a non combustible material e.g.: sand. Scoop absorbed substance into closing containers. See "Material-handling" for suitable container materials. Cover spill with non combustible material, e.g.: sand/earth. Spill must not return in its original container. Take collected spill to manufacturer/competent authority. Clean contaminated surfaces with an excess of water. Wash clothing and equipment after handling. Soak up spills with inert solids, such as clay or diatomaceous earth as soon as possible. Collect spillage. Store aways from other materials. Dam up the liquid spill. Notify authorities if liquid enters sewers or public waters.

6.4. Reference to other sections

Reference to other sections (8, 13). See Heading 8. Exposure controls and personal protection.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Precautions for safe handling : Comply with the legal requirements. Remove contaminated clothing immediately. Clean contaminated clothing. Handle and open the container with care. Keep the substance free from contamination. Do not discharge the waste into the drain. Keep away from sources of ignition - No smoking. Observe strict hygiene. Carry operations in the open/under local exhaust/ventilation or with respiratory protection. Wash hands and other exposed areas with mild soap and water before eating, drinking or smoking and when leaving work. Avoid contact with skin, eyes and clothing. Wear cold insulating gloves/face shield/eye protection. Avoid all unnecessary exposure. Ensure adequate ventilation.

Hygiene measures : Do not eat, drink or smoke when using this product. Wash ... thoroughly after handling.

7.2. Conditions for safe storage, including any incompatibilities

Storage conditions : Keep container in a well-ventilated place. Keep cool. Store in original container.

Incompatible products	:	organic materials. reducing agents. Combustible. Rust. dirt. metals. Risk of decomposition in contact with non-tolerant materials (metal oxides, metal ions, metal salts, bases, reducing agents).
Incompatible materials	:	tin. Chromium. copper. iron. lead. Manganese (Mn). nickel. zinc.
Storage temperature	:	10 - 30 °C
Heat and ignition sources	:	heat sources.
Prohibitions on mixed storage	:	combustible materials. reducing agents. (strong) acids. (strong) bases. highly flammable materials. metals. organic materials. alcohols.
Storage area	:	Store in a cool area. Keep out of direct sunlight. Store in a dark area. Keep container in a well-ventilated place. Fireproof storeroom. Under a shelter/in the open. Keep only in the original container. Meet the legal requirements.
Special rules on packaging	:	closing. nonhermetical. with pressure relief valve. clean. opaque. correctly labelled. meet the legal requirements. Secure fragile packagings in solid containers.
Packaging materials	:	SUITABLE MATERIAL: stainless steel. aluminium. polyethylene. glass. stoneware/porcelain. MATERIAL TO AVOID: monel steel. iron. copper. zinc. lead. nickel.

7.3. Specific end use(s)

No additional information available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Huwa-San TR-50		
United Kingdom	Limit value (mg/m³)	TWA: 1,4 mg/m³ (8 hr) STEL: 2,8 mg/m³ (15 min)
United Kingdom	Limit value (ppm)	TWA: 1 ppm (8 hr) STEL: 2 ppm (15 min)
Ireland	Limit value (mg/m³)	TWA: 1,5 mg/m³ (8 hr) STEL: 3 mg/m³ (15 min)
Ireland	Limit value (ppm)	TWA: 1 ppm (8 hr) STEL: 2 ppm (15 min)

List source(s): UK - EH40/2005 Containing the workplace exposure limits (WELs) for use with the Control of Substances Hazardous to Health Regulations (COSHH) 2002 (as amended). Updated by September 2006 official press release and October 2007 Supplement. IRE - 2010 Code of Practice for the Safety, Health and Welfare at Work (Chemical Agents) Regulations 2001. Published by the Health and Safety Authority.

Huwa-San TR-50	
DNEL/DMEL (Workers)	
Acute - local effects, inhalation	3 mg/m³ Respiratory inhalation
Long-term - local effects, inhalation	1,4 mg/m³ Respiratory inhalation
DNEL/DMEL (General population)	
Acute - local effects, inhalation	1,93 mg/m³ Respiratory inhalation
Long-term - local effects, inhalation	0,21 mg/m³ Respiratory inhalation
PNEC (Water)	
PNEC aqua (freshwater)	0,0126 mg/l
PNEC aqua (marine water)	0,0126 mg/l
PNEC (Sediment)	
PNEC sediment (freshwater)	0,047 mg/kg dwt
PNEC sediment (marine water)	0,047 mg/kg dwt
PNEC (Soil)	
PNEC soil	0,0023 mg/kg dwt
PNEC (STP)	
PNEC sewage treatment plant	4,66 mg/l

8.2. Exposure controls

Appropriate engineering controls	:	Avoid contact with skin, eyes, or clothing. Wash hands and face before break and at end of works. Measure the concentration in the air regularly. Emergency eye wash fountains and safety showers should be available in the immediate vicinity of any potential exposure. Do not eat, drink and do not smoke in areas where product is used. Carry operations in the open/under local exhaust/ventilation or with respiratory protection.
Personal protective equipment	:	Gloves. Face shield. Corrosionproof clothing. High gas/vapour concentration: gas mask with filter type B. Avoid all unnecessary exposure.



Materials for protective clothing	:	GIVE GOOD RESISTANCE: natural rubber. nitrile rubber. butyl rubber. polyethylene. PVC. viton. GIVE LESS RESISTANCE: neoprene. polyethylene/ethylenevinylalcohol. GIVE POOR RESISTANCE: leather. PVA. natural fibres.
Hand protection	:	Gloves. Wear protective gloves.
Eye protection	:	Face shield. Chemical goggles or safety glasses.
Skin and body protection	:	Corrosion-proof clothing. Wear suitable protective clothing.
Respiratory protection	:	High gas/vapour concentration: gas mask with filter type B. Wear appropriate mask.
Environmental exposure controls	:	Reference to other sections (6.2, 6.3, 13).
Other information	:	Do not eat, drink or smoke during use.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

Physical state	:	Liquid
Appearance	:	Liquid.
Molecular mass	:	34,01 g/mol
Colour	:	Colourless.
Odour	:	Almost odourless. Pungent.
Odour threshold	:	No data available
pH	:	0,4 – 1,8
pH solution	:	50 %
Relative evaporation rate (butylacetate=1)	:	≥ 1
Melting point	:	Not applicable
Freezing point	:	-52 °C
Boiling point	:	114 °C (50%)
Flash point	:	Not applicable
Self ignition temperature	:	No data available
Decomposition temperature	:	No data available
Flammability (solid, gas)	:	Non flammable
Vapour pressure	:	12 hPa
Vapour pressure at 50 °C	:	72 hPa
Relative vapour density at 20 °C	:	> 1
Relative density	:	1,2
Density	:	1,190 – 1,200 g/cm³ (50%)
Solubility	:	Soluble in water. Soluble in ethanol. Soluble in ether. Water: Complete
Log Pow	:	-1,57
Viscosity, kinematic	:	No data available
Viscosity, dynamic	:	1,17 - 1,249 mPa.s
Explosive properties	:	No data available
Oxidising properties	:	May intensify fire; oxidiser.
Explosive limits	:	No data available

9.2. Other information

VOC content	:	Not applicable

SECTION 10: Stability and reactivity

10.1. Reactivity

Decomposes slowly on exposure to light: oxidation resulting in increased fire or explosion risk with pressure rise and possible bursting of container. This reaction is accelerated on exposure to impurities and on exposure to temperature rise. Reacts violently with combustible materials: risk of spontaneous ignition. With (some) metals and their compounds. With (some) acids/bases. With organic material. With oxygen compounds. With (strong) reducers. Reacts with combustible materials: (increased) risk of fire/explosion. Reacts with (strong) oxidizers: (increased) risk of fire/explosion. This reaction is accelerated on exposure to impurities. Release of oxygen in contact with impurities, decomposition catalysts and incompatible substances.

10.2. Chemical stability

Unstable on exposure to heat. Unstable on exposure to light. Not established.

10.3. Possibility of hazardous reactions

heat sources. Refer to section 10.1 on Reactivity.

10.4. Conditions to avoid

Direct sunlight. Extremely high or low temperatures. Keep the substance free from contamination. Refer to Section 10 on Incompatible Materials.

10.5. Incompatible materials

Strong acids. Strong bases. dirt. May be corrosive to metals. metals. Oxidizing agent.

10.6. Hazardous decomposition products

oxygen.

SECTION 11: Toxicological information

11.1. Information on toxicological effects

Acute toxicity : Harmful if swallowed.

Huwa-San TR-50	
LD50 oral rat	> 500 mg/kg Hydrogen peroxide 50%
LD50 dermal rabbit	> 4000 mg/kg 50% H2O2
ATE (oral)	500,000 mg/kg bodyweight

hydrogen peroxide solution ... % (7722-84-1)	
ATE (oral)	500,000 mg/kg bodyweight
ATE (dust,mist)	1,500 mg/l/4h

Skin corrosion/irritation : Causes skin irritation.
pH: 0,4 – 1,8

Serious eye damage/irritation : Causes serious eye damage.
pH: 0,4 – 1,8

Respiratory or skin sensitisation : Not classified
Based on available data, the classification criteria are not met

Germ cell mutagenicity : Not classified
Based on available data, the classification criteria are not met

Carcinogenicity : Not classified
Based on available data, the classification criteria are not met

Reproductive toxicity : Not classified
Based on available data, the classification criteria are not met

Specific target organ toxicity (single exposure) : May cause respiratory irritation.

Specific target organ toxicity (repeated exposure) : Not classified
Based on available data, the classification criteria are not met

Aspiration hazard : Not classified
Based on available data, the classification criteria are not met

Potential Adverse human health effects and symptoms : Harmful if swallowed.

SECTION 12: Ecological information

12.1. Toxicity

Ecology - general : Classification concerning the environment: not applicable.

Huwa-San TR-50	
LC50 fishes 1	16,4 mg/l (96 h; Pimephales promelas; Solution >=50%)
EC50 Daphnia 1	2,4 mg/l (48 h; Daphnia pulex; Solution >=50%)
EC50 other aquatic organisms 1	2,5 mg/l (72 h; Chlorella vulgaris)
LC50 fish 2	37,4 mg/l (96 h; Ictalurus punctatus)
EC50 Daphnia 2	7,7 mg/l (24 h; Daphnia magna; Solution >=50%)

12.2. Persistence and degradability

Huwa-San TR-50	
Persistence and degradability	Biodegradability: not applicable. No (test)data on mobility of the components of the mixture available. Photolysis in the air. Not established.
Biochemical oxygen demand (BOD)	Not applicable
Chemical oxygen demand (COD)	Not applicable
ThOD	Not applicable
BOD (% of ThOD)	Not applicable

12.3. Bioaccumulative potential

Huwa-San TR-50	
Log Pow	-1,57
Bioaccumulative potential	Bioaccumulation: not applicable. Not established.

12.4. Mobility in soil

No additional information available

12.5. Results of PBT and vPvB assessment

No additional information available

12.6. Other adverse effects

: Avoid release to the environment

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Waste disposal recommendations : Dispose in a safe manner in accordance with local/national regulations. The diluted aqueous solution can be released into drain if it is in accordance with local regulations; the undiluted waste must not be released into drain. Can be incinerated, when in compliance with local regulations; rinse package before disposal. Empty containers that will be returned to the manufacturer must not be rinsed with water. Empty containers:packages must not be used for other purposes. Dispose of contents/container to ...

Additional information : LWCA (the Netherlands): KGA category 01. Hazardous waste according to Directive 2008/98/EC.

Ecology - waste materials : Avoid release to the environment.

EURAL code : 06 13 99 - wastes not otherwise specified

SECTION 14: Transport information

In accordance with ADR / RID / IMDG / IATA / ADN

14.1. UN number

UN-No (ADR) : 2014

UN-No.(IATA) : 2014

UN-No. (IMDG) : 2014

14.2. UN proper shipping name

Proper Shipping Name : Hydrogen peroxide, aqueous solution

Transport document description : UN 2014 Hydrogen peroxide, aqueous solution, 5.1 (8), II, (E)

14.3. Transport hazard class(es)

Class (UN) : 5.1

Classification code (UN) : OC1

Class (IATA) : 5.1

Class (IMDG) : 5.1

Subsidiary risk (IMDG) : 8

Subsidiary risk (IATA) : 8

Hazard labels (UN) : 5.1, 8



14.4. Packing group

Packing group (UN) : II

Packing group (IMDG) : II

14.5. Environmental hazards

Dangerous for the environment : No

Marine pollutant : No

Other information : No supplementary information available.

14.6. Special precautions for user

14.6.1. Overland transport

State during transport (ADR-RID) : as liquid

Hazard identification number (Kemler No.) : 58

Classification code (UN) : OC1

Orange plates :



Tunnel restriction code : E

14.6.2. Transport by sea

EmS-No. (Fire) : F-H

EmS-No. (Spillage) : S-Q

14.6.3. Air transport

No additional information available

14.6.4. Inland waterway transport

No additional information available

14.7. Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Not applicable

SECTION 15: Regulatory information

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

15.1.1. EU-Regulations

No REACH Annex XVII restrictions

Contains no REACH candidate substance

VOC content : Not applicable

Seveso Information :

15.1.2. National regulations

Please note Directive 92/85/EEC (Pregnant Workers directive) and amendments.
Please note Directive 94/33/EC (Preotection of Young Workers at the workplace Directive) and amendments.

15.2. Chemical safety assessment

No chemical safety assessment has been carried out

SECTION 16: Other information

Indication of changes:
Revised safety data sheet in accordance with commisssion regulation (EU) No 453/2010.

Data sources : The information in this safety data sheet is based on data and samples provided to BIG. The sheet was written to the best of our ability and according to the state of knowledge at that time. The safety data sheet only constitutes a guideline for the safe handling, use, consumption, storage, transport and disposal of the substances/preparations/mixtures mentioned under point 1. New safety data sheets are written from time tot time. Only the most recent versions may be used. Old versions must be destroyed. unless indicated ontherwise word for word on the safety data sheet, the information does not apply to substances/preparations/mixtures in purer form, mixed with other substances or in processes. The safety data sheets offers no quality specification for the substances/preparations/mixtures in questions. REGULATION (EC) No 1272/2008 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL of 16 December 2008 on classification, labelling and packaging of substances and mixturejs, amending and repealing Directives 67/548/EEC and 1999/45/EC, and amending Regulation (EC) No 1907/2006.

Other information : None.

Full text of H- and EUH-phrases::

Acute Tox. 4 (Inhalation:dust,mist)	Acute toxicity (inhalation:dust,mist) Category 4
Acute Tox. 4 (Oral)	Acute toxicity (oral), Category 4
Eye Dam. 1	Serious eye damage/eye irritation, Category 1
Ox. Liq. 1	Oxidising Liquids, Category 1
Skin Corr. 1A	Skin corrosion/irritation, Category 1A
Skin Irrit. 2	Skin corrosion/irritation, Category 2
STOT SE 3	Specific target organ toxicity — Single exposure, Category 3, Respiratory tract irritation
Aquatic Chronic 3	Chronic aquatic toxicity, Category 3
H271	May cause fire or explosion; strong oxidiser
H302	Harmful if swallowed
H314	Causes severe skin burns and eye damage
H315	Causes skin irritation
H318	Causes serious eye damage
H332	Harmful if inhaled
H335	May cause respiratory irritation
H412	Harmful to aquatic life with long lasting effects

SDS EU (REACH Annex II)

This information is based on our current knowledge and is intended to describe the product for the purposes of health, safety and environmental requirements only. It should not therefore be construed as guaranteeing any specific property of the product