Safety Data Sheet

Huwa-San®

SDS (formerly MSDS)

Conforms to HCS 2012 - United States

Date: 28/04/2016

UN2014

ADR 5.1

Dutch Direct®

Section 1. Identification

1.1. Product Identifier	
Product name used on the label:	Huwa-San TR-50
1.2. Other means of identification	
/	
1.3. Recommended use of the chemical and restrictions on use	
Recommended use:	Disinfectant.
Recommended restrictions:	No information.
1.4. Manufacturer/importer/supplier/distributor information	
DUTCH DIRECT 18 North 57th Drive Ste #1 Phoenix Az 85043 United States Tel: +1 (844) 388-2434 info@dutchdirect.us	ROAM TECHNOLOGY NV I.Z. Poort Genk 6835, 3600 Genk, Belgium Tel: +32 89 44 00 42 info@roamtechnology.com
1.5. Emergency phone number	
Supplier (Dutch Direct):	+1 (844) 388-2434
Supplier (Roam Technology NV):	+32 89 44 00 42

Section 2. Hazard(s) Identification

2.1. Classification of the chemical in accordance with paragraph (d) of §1910.1200		
Physical hazards:	Oxidizing Liquids.	Category 2
Health hazards:	Acute toxicity – Oral.	Category 4
	Skin corrosion/Irritation.	Category 1 Sub-category B
	Eye damage/Irritation.	Category 1
	Specific target organ toxicity – SE	Category 3

Environmental hazards:	Aquatic – Chronic	Category 3.
2.2. Label Elements		
Pictograms:		
Signal word:	Danger.	
Hazard statement(s):	May intensify fire; oxidizer.	
	Harmful if swallowed.	
	Causes severe skin burns and eye damage.	
	Causes serious eye damage.	
	May cause respiratory irritation.	
	Harmful to aquatic life with long lasting effects.	
Precautionary statement(s):		
Prevention:	Keep away from heat, hot surfaces, sparks,open flames and other ignition sources. No smoking. Keep away from clothing and other combustible materials. Wash hands thoroughly after handling Do not eat, drink or smoke when using this product. Wear protective gloves/protective clothing/eye protection/face protection. Do not breathe dust/fume/gas/mist/vapours/spray. Use only outdoors or in a well-ventilated area. Avoid release to the environment.	
Response:	IF SWALLOWED:	Rinse mouth. Do NOT induce vomiting.
	IF ON SKIN (or hair):	Take off immediately all contaminated clothing. Rinse skin with water [or shower]. Wash contaminated clothing before reuse. Specific treatment (see instructions on this label). If skin irritation occurs: Get medical advice/attention. Take off contaminated clothing and wash it before reuse.

Response:	IF IN EYES:	Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Immediately call a POISON CENTER/doctor.
	IF INHALED:	Remove person to fresh air and keep comfortable for breathing. Call a POISON CENTER/doctor if you feel unwell.
	In case of fire:	Use water spray or sand to extinguish.
Storage:	Store in a well-ventilated place. Keep container tightly closed. Store locked up.	
Disposal:	Dispose of contents/container in accordance with national regulation.	

Hazard(s) not otherwise classified (HNOC):
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

Substance		
Name	**CAS**	**%**
Hydrogen peroxide solution	7722-84-1	49-49,9

Section 4. First-aid measures

4.1. First-aid measures	
General measures:	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.
Skin contact:	Wash immediately with lots of water. Take victim to a doctor if irritation persists. Wash contaminated clothing before reuse.
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.

Inhalation:	Remove the victim into fresh air. Respiratory problems: consult a doctor/medical service. Respiratory arrest: artificial respiration or oxygen.
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/effects, acute and delayed	
Skin contact:	Caustic burns/corrosion of the skin. Paleness.
Eye contact:	Corrosion of the eye tissue. Permanent eye damage. Causes serious eye damage.
Inhalation:	Headache. Cough. Nausea. Slight irritation. Vomiting. May cause respiratory irritation. Dizziness.
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	
Provide general supportive measures.	

Section 5. Fire-fighting 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. Specific hazards arising from the chemical	
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. Special protective equipment and precautions for fire-fighters	
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	
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.

6.2. Methods and materials for containment and cleaning up

Equip cleanup crew with proper protection. Ventilate area. Dam up the liquid spill. 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.

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

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 hands 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 wellventilated 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
	MATERIALS TO AVOID:	Monel steel. iron. copper. zinc. lead. nickel.

Section 8. Exposure controls/personal protection

8.1. Occupational exposure limits

US. OSHA Table Z-1 Limits for Air Contaminants (29 CFR 1910.1000)

Component	Type	Value
Hydrogen peroxide solution (CAS: 7722-84-1)	PEL	1 ppm
	PEL	1,4 mg/m3

US. ACGIH Threshold Limit Values

Component	Type	Notations	Value	TLV Basis
Hydrogen peroxide solution (CAS: 7722-84-1)	TWA	-	1 ppm	Eye, URT, & skin irr

8.2. Appropriate engineering controls

Good general ventilation (typically 10 air changes per hour) should be used. Ventilation rates should be matched to conditions. If applicable, use process enclosures, local exhaust ventilation, or other engineering controls to maintain airborne levels below recommended exposure limits. If exposure limits have been established, maintain airborne levels to an acceptable level.

8.3. Individual protection measures, such as personal protective equipment

Eye/face protection:	Safety glasses with side protection.	
Skin protection:	**Hand protection:**	Wear protective gloves.
	Other:	Wear suitable 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.
Respiratory protection:	If engineering controls do not maintain airborne concentrations below recommended exposure limits or to an acceptable level, an approved respirator must be worn. Gas mask with filter type B.	
Thermal hazards:	Wear appropriate thermal protective clothing, when necessary.	
General hygiene considerations:	Avoid contact with skin, eyes, or clothing. Wash hands and face before break and at end of works. Do not eat, drink or smoke during use. 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.	

Section 9. Physical and chemical properties

9.1. Information on basic physical and chemical properties

Appearance	Physical state	Liquid.
	Form	Liquid.
	Color	Colourless.
Odor		Almost odourless. Pungent.
Odor threshold		No data available.
pH		0,4 – 1,8 50% Solution
Melting point/freezing point		-52 °C
Initial boiling point and boiling range		114 °C (50%)
Flash point		No data available.
Evaporation rate		≥ 1 (butylacetate=1)
Flammability (solid, gas)		No data available.
Upper/lower flammability or explosive limits	Flammability limit – lower (%)	Non flammable.
	Flammability limit – upper (%)	Non flammable.
	Explosive limit – lower (%)	No data available.
	Explosive limit – upper (%)	No data available.
Vapor pressure		12 hPa; Vapour pressure at 50 °C: 72 hPa
Vapor density		>1 at 20 °C
Density		1,190 – 1,198 g/cm³ (50%)
Solubility(ies)		Soluble in water. Soluble in ethanol. Soluble in ether.
Partition coefficient n-octanol/water		-1,57
Auto-ignition temperature		No data available.

Decomposition temperature	No data available.
Viscosity	Dynamic: 1,17 - 1,249 mPa.s

May intensify fire; oxidiser.

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.

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 the likely routes of exposure	
Inhalation:	Do not inhale this material. Inhalation may cause headache, cough, nausea, slight irritation, vomiting. May cause respiratory irritation. Dizziness.
Ingestion:	Do not ingest.
Skin contact:	Avoid contact with skin. May cause caustic burns/corrosion of the skin. Paleness.
Eye contact:	Contact with eyes causes corrosion of the eye tissue and permanent eye damage.
11.2. Symptoms related to the physical, chemical and toxicological characteristics	
Skin contact:	Caustic burns/corrosion of the skin. Paleness.
Eye contact:	Corrosion of the eye tissue. Permanent eye damage. Causes serious eye damage.
Inhalation:	Headache. Cough. Nausea. Slight irritation. Vomiting. May cause respiratory irritation. Dizziness.
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.
11.3. Information on toxicological effects	
(a) Acute toxicity	

Name	Exposure route	Type	Species	Time	Value	Method	Remark
For product	oral.	LD50	rat		> 500 mg/kg		
For product	dermal.	LD50	rabbit		> 4000 mg/kg		
For product	oral.	ATE			500 mg/kg bw		
hydrogen peroxide solution ... % (7722-84-1)	oral.	ATE			500 mg/kg bw		
hydrogen peroxide solution ... % (7722-84-1)	inhalation (dusts/mists)	ATE		4 h	1500 mg/l		

Additional information: Harmful if swallowed.

Skin corrosion/irritation:	Causes skin burns. pH: 0,4 – 1,8	
Serious eye damage/irritation:	Causes serious eye damage. pH: 0,4 – 1,8	
Respiratory or skin sensitization:	Respiratory sensitization:	Not classified.
	Skin sensitization:	Not classified.
Germ cell mutagenicity:	Not classified. Based on available data, the classification criteria are not met.	
Carcinogenicity:	This product is not considered to be a carcinogen by IARC, ACGIH, NTP or OSHA.	
Reproductive toxicity effects:	This product is not expected to cause reproductive or developmental effects.	
Specific target organ toxicity – single exposure:	May cause respiratory irritation.	
Specific target organ toxicity – repeated exposure:	Not classified.	
Aspiration hazard:	Not classified.	

Section 12. Ecological information

12.1. Ecotoxicity

Harmful to aquaticlife with long lasting effects. Avoid release to the environment.

Acute toxicity

For product

Type	Value	Exposure time	Species	Organism	Method	Remark
LC50	16,4 mg/L	96 h	fish	Pimephales promelas		
EC50	2,4 mg/L	48 h	crustacea	Daphnia pulex		
EC50	2,5 mg/L	72 h	algae	Chlorella vulgaris		
LC50	37,4 mg/L	96 h	fish	Ictalurus punctatus		
EC50	7,7 mg/L	24 h	daphnia	Daphnia magna		

Chronic toxicity
No information.
12.2. Persistence and degradability

Biodegradability:	Not applicable. No (test)data on mobility of the components of the mixture available. Photolysis in the air. Not established.

12.3. Bioaccumulative potential
12.3.1. Partition coefficient
For product

Media	Value	Temperature	pH	Concentration	Method
Octanol-water (log Pow)	-1,57				

12.4. Mobility in soil
No additional information available.
12.5. Other adverse effects
No other adverse environmental effects (e.g. ozone depletion, photochemical ozone creation potential, endocrine disruption, global warming potential) are expected from this component.

Section 14. Transport information

14.1. UN number
UN 2014
14.2. UN proper shipping name
HYDROGEN PEROXIDE, AQUEOUS SOLUTION
14.3. Transport hazard class(es)
5.1

14.4. Packing group	
II	
14.5. Environmental hazards	
NO.	
14.6. Special precautions for user	
Limited quantities:	1L
Tunnel restriction code:	(E)
IMDG EmS:	F-H, S-Q
14.7. Transport in bulk according to Annex II of Marpol and the IBC Code	
Goods may not be carried in bulk in bulk containers, containers or vehicles.	 

Section 15. Regulatory information

US federal regulations:	This product is a “Hazardous Chemical” as defined by the OSHA Hazard Communication Standards, 29 CFR 1910.1200.
15.1. Safety, health and environmental regulations specific for the product in question	
No data available.	

Section 16. Other information

Issue date:	23-october-2013
Revision date:	28-april-2016
Version #:	2.2

The information of this SDS is based on the present state of our knowledge. The user's working conditions however, are beyond our knowledge and control. The product is not to be used for purposesother than those specified under **Section 1** without a written permission. It remains the responsibility of the user to ensure thatthe necessary steps are taken to meet the laws and regulations. Handling of the product may only be done by people above 18 years of age, who are satisfactorily informed of how to do the work, the hazardous properties and necessary safety precautions.The information given in this SDS is to describe the product only in terms of health and safety requirements and should not,therefore, be construed as guaranteeing specific properties.

FORMULA 1
CLEANER/SANITIZER

Dutch Direct®

18 North 57th Drive Ste #1 Phoenix Az 85043

(844) 388 - 2434 www.dutchdirect.us info@dutchdirect.us

dutchdirect_ Dutchdirect Dutchdirect