SDS SAFETY DATA SHEET

Preparation Date: May 1, 2015

1. IDENTIFICATION SUBSTANCE & COMPANY

Product Name Agent Orange Cleaner
Product codes O11, 09, 06, 012
Other means of Identification: Cleaning Solution

Hollander Corporation 1-800-741-5000 8-5 m-f
Hollander Corporation 1-706-483-2500 24/7
P.O. Box 850 Adairsville GA 30103
Emergency telephone PERS 1-800-633-8253 24/7
Product Use Description: Professional Use Only!

2. HAZARDS IDENTIFICATION

This material is classified as hazardous under OSHA regulations (29 CFR 1910.1200) (Hazcom 2012).

GHS Classification

Acute toxicity, Oral	Category 4
Skin corrosion	Category 2
Causes eye irritation	Category 2B

Label Elements:
Signal Words: WARNING
2.2 Pictograms:

2.4 Hazard Statements

H302+	Harmful if swallowed
H315+H320	Causes skin and eye irritation

2.5 Precautionary Statements

P264	Wash hands thoroughly after handling.
P270	Do not eat, drink or smoke when using this product
P280	Wear eye protection.
P301+ P312	IF SWALLOWED: Call a poison center or doctor.
P302+ P352	IF ON SKIN: Wash with plenty of water
P362+ P364	Take off contaminated clothing and wash it before reuse
P332+ P313	If skin irritation occurs: Get medical attention.
P305+ P351+ P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337+ P313	If eye irritation persists: Get medical advice/attention.
P101	If medical advice is needed: Have product container or label at hand.
P102	Keep out of reach of children.
P103	Read label before use.

3. COMPOSITION / INFORMATION ON INGREDIENTS

Chemical Name	CAS #	Concentration wt/wt(*)
Sodium Metasilicate	6834-92-0	<.20
d-Limonene	5989-27-5	<3
Surfactant Blend	Trade Secret	1-10
* Note: The exact concentration of the Surfactant Blend is being withheld as a trade secret.		

4. FIRST AID MEASURES

Description of first aid measures:

INHALATION: Not likely when used in present form. If inhaled remove victim to fresh air and keep at rest. Call a poison center or doctor, if you feel unwell.
SKIN CONTACT: Wash with plenty of soap and water. Take off contaminated clothing and wash before reuse. If skin irritation occurs get medical attention.
EYE CONTACT: If product gets in eyes flush with water for at least 15 minutes. If eye irritation persists seek medical advice/attention.
INGESTION: Do NOT induce vomiting unless instructed by medical personal. Never give anything by mouth to an unconscious person. Get medical attention.
Notes to physician, Hazards:
Most important symptoms and effects, both acute and delayed:
May cause skin irritation.
May cause serious eye irritation.
Ingestion may cause gastrointestinal irritation, nausea, vomiting, diarrhea and burns to the mouth, throat and esophagus**. Indication of any immediate medical attention and special treatment needed:**
Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Extinguishing media:
Suitable extinguishing media: Water fog, Carbon dioxide, Dry chemical, Foam. Unsuitable extinguishing media: Not available.
Special hazards arising from the substance or mixture: None known.
Flammability classification: Not flammable by OSHA/WHMIS criteria.
Special protective equipment and precautions for firefighters: Protective equipment for fire-fighters: Firefighters should wear proper protective equipment (Bunker gear) and self-contained breathing apparatus with full face operated in positive pressure mode.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions: For personal protection see section 8. Persons not wearing protective equipment should be excluded from area of spill until clean-up has been completed.
Environmental precautions: Prevent spreading over a wide area (e.g. by containment or oil barriers). Do not let product enter drains. Do not flush into surface water or sanitary sewer system.
Methods for cleaning up: Keep in suitable, closed containers for disposal. Soak up with inert absorbent material (e.g. sand, silica gel, acid binder, universal binder, sawdust).
Other information: Comply with all applicable federal, state, and local regulations.

7. HANDLING AND STORAGE

Precautions for safe handling:
Obtain special instructions before use. Do not handle until all safety precautions have been read and understand. Wear protective gloves and eye/face protection. Adequate ventilation should be supplied. Avoid prolonged contact with skin, eyes and clothing. Keep away from heat. Keep container tightly closed. Conditions for safe storage: Store in cool, dry and well ventilated place. Containers should be clearly identified, clear of obstructions and accessible only to authorized personnel. Have appropriate fire extinguishers/sprinkler system in place. Spill clean-up equipment should be in or near storage area.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure limits

Chemical Name	ACGIH-TLV	OSHA-PEL
Sodium Metasilicate	N/A	5mg/m3 (TWA)
D-Limonene	N/A	30 ppm (8h TWA) (AIHA standard)
Surfactant Blend	N/A	Not Available

Ventilation and Engineering Measures: Use in well ventilated area. Apply technical measures to comply with occupational exposure limits if needed.
Respiratory Measures: If airborne concentrations are above the permissible exposure limit, use NIOSH approved respirators.
Skin Protection: Wear protective gloves. Where extensive exposure to the product is possible, use resistant apron/suit and boots.
Eye/Face Protection: Goggles or safety glasses with side shields.
Other Protective Equipment: Ensure that eyewash stations and a safety shower are close to the workstation(s).
General Hygiene Considerations: Avoid prolonged contact with eyes, skin and clothing. Do not eat or drink when using this product. Wash hands after handling. Remove and wash all contaminated clothing before re-use. Handle in accordance with good industrial hygiene and safety practice.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance:	Orange,clear
Odor:	Citrus
Odor threshold:	Not Available
PH:	11.5 to 12.5
Melting/Freezing pointing:	28 F
Boiling point and boiling range:	212 F
Flash point:	>130 F
Evaporation point (Butyl Acetate=1):	Not Available
Flammability (method determination):	Not Available
Lower flammability limit	Not Available
Upper flammability limit (% by vol.):	Not Available
Vapor pressure:	Not Available
Vapor density:	Not Available
Relative density:	1.00-105
Solubility in water:	>96%
Partition Coefficient (n-octanol/water):	Not Available
Auto ignition temperature:	Not Available
Decomposition temperature:	Not Available
Viscosity:	Not Available
Volatiles (% by wt) =	<3.5
Volatile organic compounds:	Not Available
Other physical/chemical comments:	No other info

10. STABILITY AND REACTIVITY
Reactivity: Not normally reactive.
Chemical stability: Stable under normal conditions.
Possibility of hazardous reactions: Hazardous polymerization does not occur.
Conditions to avoid: Heat. Contact with incompatible materials.
Incompatible materials: Strong oxidizers, Strong acids.
Hazardous decomposition products: Carbon oxides.

11. TOXICOLOGICAL INFORMATION
Information on routes of exposure:
Routes of entry - Inhalation: YES
Routes of entry - Skin & Eye: YES
Routes of entry - Ingestion: YES
Routes of entry - Skin Absorption: YES
Potential Health Effects:
Signs and symptoms of short term exposure:
Signs and symptoms: Inhalation – May cause respiratory irritation.
Signs and symptoms: Ingestion – Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Larger amounts may cause burns to the throat and esophagus.
Signs and symptoms: Skin – May cause irritation. Symptoms may include redness, edema, drying, defatting and cracking of the skin.
Signs and symptoms: Eyes – May cause serious irritation.
Potential Chronic Health Effects: None known.
Mutagenicity: Not hazardous by OSHA/WHMIS criteria.
Carcinogenicity: No components are listed as carcinogens by ACGIH, IARC, OSHA or NTP.
Reproductive effects: Not hazardous by OSHA/WHMIS criteria.
Sensitization to material: No data available to indicate product may be a sensitizer.
Specific target organ effects: Not Available.
Medical conditions aggravated by overexposure: Pre-existing skin and eye conditions.
Toxicological data: The calculated ATE value for this mixture is well above classification parameters.
ATE (oral) = 125,000mg/kg

Chemical Name	ACGIH-TLV	OSHA-PEL
Sodium Metasilicate	847mg/kg (Rat)	Not Available
d-Limonene	LD50 4400mg/kg (Rat)	Not Available
Surfactant Blend	Not Available	Not Available

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12. ECOLOGICAL INFORMATION
Ecotoxicity: Remark: Very toxic for fish
Additional ecological information:
General notes: Due to available data on eliminability/decomposition and bioaccumulation potential prolonged term damage of the environment cannot be excluded. Avoid transfer into the environment. Very toxic for aquatic organisms also poisonous for fish and plankton in water bodies.
Mobility is soil: This product itself has not been tested.
Persistence and degradability: This product itself has not been tested.
Bioaccumulation potential: This product itself has not been tested.
Other adverse environmental effects: None Known.
Aquatic toxicity: The material is harmful to the environment. Toxic for aquatic organisms

13. DISPOSAL CONSIDERATIONS
Handling for disposal: Handle in accordance with good industrial hygiene and safety practice. Refer to protective measures listed in sections 7 and 8.
Methods of disposal: Dispose in accordance with all applicable federal, state, provincial and local regulation. Contact your federal, state, provincial and local authorities for specific rules.

14. TRANSPORT INFORMATION

DESCRIPTION	CLASS	NMFCCC
CLEANING COMPOUNDS,NOS	65	Not Available

15. REGULATORY INFORMATION
Safety, health and environmental regulations/legislation specific for the substance or mixture
· **United States (USA)**
· **SARA**
· **Section 355 (extremely hazardous substances):**
Substance is not listed.
· **Section 313 (Specific toxic chemical listings):**
Substance is not listed.
· **TSCA (Toxic Substances Control Act):**
Substance is listed.
· **Proposition 65 (California)**
· **Chemicals known to cause cancer:**
Substance is not listed.
· **Chemicals known to cause reproductive toxicity for females:**
Substance is not listed.
· **Chemicals known to cause reproductive toxicity for males:**
Substance is not listed.
· **Chemicals known to cause developmental toxicity:**
Substance is not listed.
· **Carcinogenic categories**
· **EPA (Environmental Protection Agency)**
Substance is not listed.

16. OTHER INFORMATION
HMIS – Hazardous Materials Identification System
Health -2 Flammability -1 Physical Hazard -1 PPE –B
NFPA – National Fire Protection Association
Health -2 Flammability -1 Reactivity -1
Abbreviations legend;
ACGIH: American Conference of Governmental Industrial Hygienist
CAS: Chemical abstract Services
CERCLA: Comprehensive Environmental Response, Compensation, and Liability
Act of 1980
CFR: Code of Federal Regulations
CSA: Canadian Standards Association
DOT: Department of Transportation
ECOTOX: U.S. EPA Ecotoxicology Database
EINECS: European Inventory of Existing Commercial chemical Substances
EPA: Environmental Protection agency
HSDB: Hazardous Substances database
IARC: International Agency for Research on Cancer
IBC: Intermediate Bulk Container
IUCLID: International Uniform Chemical Information Database
LC: Lethal Concentration
LD: Lethal Dose
NIOSH: National Institute of Occupational Safety and Health
NTP: National Toxicology Program
OECD: Organization for Economic Cooperation and Development
PEL: Permissible exposure limit
RCRA: Resource Conservation and Recovery Act
RTECS: Registry of Toxic Effects of Chemical Substances
SARA: Superfund Amendments and Reauthorization Act
SDS: Safety Data Sheet
STEL: Short Term Exposure Limit
TDG: Canadian Transportation of Dangerous Goods Act & Regulations
TLV: Threshold Limit Values
TWA: Time Weighted Average
WHMIS: Workplace Hazardous Materials Identification

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This MSDS has been prepared by Hollander Corporation 1-800-741-5000.