John R Hess & Company, Inc.

KOVKLEEN™ 410

Section 1. Identification

Product Identifier	**KOVKLEEN 410**
General Use	Cleaning Agent
Physical Description	Amber to light brown liquid

Manufacturer/Importer/Supplier/Distributor Information

Company Name	John R Hess & Company, Inc.
Address	400 Station St Cranston, RI 02910 USA
Telephone	(401) 785-9300 (800) 556-4377
E-mail	custerv@jrhess.com
Emergency Phone Numbers	Infotrac 1-800-535-5053 (Spill, Leak, Fire, Exposure, Accident) +1 (352) 323-3500 (Outside North America)

Section 2 Hazards Identification

Classification of the substance or mixture:

This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR §1910.1200).

Physical hazards	
Corrosive to metals	Category 1
Health hazards	
Skin corrosion/irritation	Category 1
Serious eye damage/eye irritation	Category 1
Specific target organ toxicity (single exposure)	Category 3 respiratory tract irritation
Environmental hazards	
Acute aquatic toxicity	Category 1
Chronic aquatic toxicity	Category2
OSHA hazards	Not classified

Label Elements

Globally Harmonized System (GHS) Classification and Labeling GHS

Signal Word: DANGER

Hazard Statements:

May be corrosive to metals.
Causes severe skin burns and eye damage
May cause respiratory irritation
Very toxic to aquatic life with long lasting effects
Toxic to aquatic life with long lasting effects.

Precautionary Statements

Prevention	Wear protective gloves/protective clothing eye/face protection. Do not breathe mist or vapor. Use only outdoors or in a well-ventilated area. Wash thoroughly after handling. Keep in original container. Avoid releases to the environment. Do not eat, drink or smoke when using this product
Response	IF SWALLOWED: rinse mouth. Do NOT induce vomiting IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing for at least 15 minutes. Wash contaminated clothing before reuse. Absorb spillage to prevent material damage. Collect spillage.
Storage	Store in a well-ventilated place. Keep the container closed. Store in corrosive resistant aluminum container with a resistant inner liner.
Disposal	Dispose of contents in accordance with local/regional/national/international regulations.
Hazards not otherwise classified (HNOC)	None known
Supplemental Information	Contact with acids liberates toxic gas.

Section 3. Composition / Information on Ingredients

Hazardous

Chemical Name	CAS	Weight-%	EC
Sodium hypochlorite	7681-52-9	10-16	231-668-3

Sodium chloride	7647-14-5	12	231-598-3
Caustic soda	1310-73-2	4	215-185-5

Non-Hazardous

Chemical Name	CAS No	Weight-%	EC No
Water	7732-18-5	Balance	231-791-2

Section 4. First Aid Measures

General Advice	Immediate medical attention is required.
Inhalation	Move to fresh air. Call a physician if symptoms develop or persist. If not breathing, give artificial respiration. If breathing is difficult, give oxygen.
Skin Contact	Remove all contaminated clothes and shoes. Wash off IMMEDIATELY with plenty of water for at least 15 – 20 minutes. Wash contaminated clothing before reuse Call a physician or poison control center immediately
Eye Contact	Flush eyes immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses if present and easy to do so. Continue rinsing. Immediate medical attention is required.
Ingestion	Call a physician or poison control center immediately Rinse mouth. Do NOT induce vomiting. If vomiting occurs, keep head low so that the stomach content doesn't get into the lungs.
Most important symptoms/effects, acute and delayed	Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.
Indication of immediate medical attention and special treatment needed	Treat symptomatically. Chemical Burns: Flush with water immediately. While flushing, remove clothes which do not adhere to affected area. Call an ambulance. Continue flushing during transport to hospital/
General Advice:	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves. Show this safety data sheet to the doctor in attendance.

Section 5. Fire-fighting Measures

Suitable Extinguishing Media	Water, fog, foam, dry chemical powder. Carbon Dioxide (CO2)
Unsuitable Extinguishing Media	Do not use water jet as an extinguisher, as this will spread the fire. Do not use dry extinguishing media that contains ammonium compounds.
Specific Hazards Arising from the Chemical	During fire, gasses hazardous to health may be formed

Protective Equipment and Precautions for Firefighters	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
Firefighting equipment/instructions	In case of fire and/or explosion do not breathe fumes. Use standard firefighting procedures and consider the hazards of other involved materials.
General Fire Hazards	No unusual fire or explosion hazards noted.

Section 6. Accidental Release Measures

Personal Precautions	Use personal protective equipment as required. Evacuate personnel to safe areas. Avoid contact with skin, eyes or clothing. Keep people away from and upwind of spill/leak.
Environmental Precautions	Do not discharge into drains, water courses or onto the ground. For waste disposal, see Section 13. Never return spills in original containers for re-use.
Methods & Materials for Containment and Cleaning Up	Large spills: Stop the flow of material if can performed without risk. Dike the spilled material where possible. Absorb in vermiculite, dry sand or earth and place into containers. Follow product recovery, flush area with water. Small spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.

Section 7. Handling and Storage

Precautions for Safe Handling	Use personal protective equipment as required. Avoid contact with skin, eyes or clothing. Chemical attack increases with solution strength. Use only with adequate ventilation. Observe good industrial hygiene practices. Do not apply heat or direct sunlight. Temperature and product concentration affect product quality and decomposition rates.
Storage Conditions	Keep container tightly closed in a dry and well-ventilated place. Store in a corrosive resistant container. Consult container manufacturer for additional guidance. Store away from and do not mix with incompatible materials. For frozen product, contact manufacturer for guidance.
Incompatible Materials	Acids, oxidizers, organics, reducing agents and all metals except titanium.

Section 8. Exposure Controls / Personal Protection

Occupational exposure limits

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

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)		
US. ACGIH Threshold Limit Values	PEL	2 mg/m3

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)	Ceiling	2 mg/m3

US. NIOSH: Pocket Guide to Chemical Hazards

Components	Type	Value
Sodium hydroxide (CAS 1310-73-2)		
Ceiling	2 mg/m3	

US. Workplace Environmental Exposure Level (WEEL) Guides

Components	Type	Value
Sodium hypochlorite (CAS 7681-52-9)		

Biological limit values

Appropriate engineering controls

STEL 2 mg/m3

No biological exposure limits noted for the ingredient(s).

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 not been established, maintain airborne levels to an acceptable level. Eye wash facilities and emergency shower must be available when handling this product.

Individual protection measures, such as personal protective equipment:

Eye/face protection	Wear safety glasses with side shields (or goggles) and a face shield. Wear a full-face respirator, if needed.
Skin protection:	
Hand protection	Wear appropriate chemical resistant gloves.
Other	Wear appropriate chemical resistant clothing. Reports indicate that sodium hypochlorite can react with various fabrics usually increasing with concentration. Reactions vary significantly depending on strength of chemical, material, fabric treatment and color of dyes. FRC treated cotton has a stronger response than plain cotton. Poly blend fabrics and meta aramid fabric have a weaker response than natural fibers. Contact the Personal Protective Equipment manufacturer for specific information about their products.
Respiratory protection	If engineering controls do not maintain airborne concentrations below recommended exposure limits (where applicable) or to an acceptable level (in countries where exposure limits have not been established), an approved respirator must be worn.
Thermal hazards	Wear appropriate thermal protective clothing, when necessary.
General hygiene considerations	Always observe good personal hygiene measures, such as washing after handling the material and before eating, drinking, and/or smoking. Routinely wash work clothing and protective equipment to remove contaminants.

Section 9. Physical and Chemical Properties

Appearance	
Physical State	Liquid
Form	Liquid
Color	Not available
Odor	Pungent
Odor Threshold	0.9 mg/m³
pH	11-14 (25 °C/77 °F)
Melting point/freezing point	-4 °F (-20 °C) (7% solution)
Initial boiling point and boiling range	Not available
Flash point	Not available
Evaporation rate	No data available
Flammability (solid, gas)	Not available
Upper/lower flammability or explosive limits:	
Flammability limit - lower (%)	Not applicable
Flammability limit - upper (%)	Not applicable
Explosive limit - lower (%)	Not available
Explosive limit -upper (%)	Not available
Vapor pressure	12 mm Hg (20°C/68°F)
Vapor density	Not available
Relative density	Not available
Solubility(ies):	
Solubility (water)	Completely miscible
Partition coefficient (n-octanol/water)	Not available
Auto-ignition temperature	Not available
Decomposition temperature	Not available
Viscosity	Not available
Other information	Not available
Bulk density	Not available
Molecular formula	NaOCl
Molecular weight	74.5 g/mol

Section 10. Stability and Reactivity

Reactivity	The product is stable and non-reactive under normal conditions of use, storage and transport.

Chemical Stability	Material is stable under normal conditions.
Possible of hazardous reactions	Hazardous polymerization does not occur.
Conditions to avoid	Contact with incompatible materials. Avoid ultraviolet (UV) light sources. Excessive heat. Reacts violently with strong acids. Acid contact will produce chlorine gas. Amine contact will produce chloramines.
Incompatible materials	Strong oxidizing agents. Acids. Metals. Organic compounds. Ammonia.
Hazardous decomposition products	No hazardous decomposition products are known.

Section 11. Toxicological Information

Information on likely routes of exposure:

Inhalation	Vapors and spray mist may irritate throat and respiratory system and cause coughing.
Skin contact	Causes skin burns.
Eye contact	Causes eye burns.
Ingestion	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea. Ingestion may produce burns to the lips, oral cavity, upper airway, esophagus and possibly the digestive tract.
Symptoms related to the physical, chemical and toxicological characteristics	Corrosive effects. Symptoms may include stinging, tearing, redness, swelling, and blurred vision. Permanent eye damage including blindness could result.

Information on toxicological effects:

Acute toxicity	Occupational exposure to the substance or mixture may cause adverse effects.

Product	Species	Test Result
Sodium Hypochlorite, **12.5-17%** (CAS Mixture)		
Acute		
Dermal		
LD50	Rabbit	> 2 g/kg
Oral		
LD50	Rat	3 - 5 g/kg

Skin corrosion/irritation	Causes severe skin burns and eye damage
Serious eye damage/eye irritation	Causes serious eye damage

Respiratory or skin sensitization:

Respiratory sensitization	This product is not expected to cause respiratory sensitization.

Skin sensitization	This product is not expected to cause skin sensitization
Germ cell mutagenicity	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
Carcinogenicity	This product is not considered to be a carcinogen by IARC, ACGIH, NTP, or OSHA

IARC Monographs. Overall Evaluation of Carcinogenicity:

Sodium hypochlorite (CAS 7681-52-9)	3 Not classifiable as to carcinogenicity to humans
NTP Report on Carcinogens	Not listed

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed

Reproductive toxicity	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, however droplets of the product may be aspirated into the lungs through ingestion or vomiting and may cause a serious chemical pneumonia.
Chronic effects	Prolonged or repeated overexposure causes lung damage.
Further information	Prolonged inhalation may be harmful

Section 12. Ecological Information

Product		Species	Test Results
Sodium Hypochlorite, **12.5-17%** (CAS Mixture)			
Aquatic			
Crustacea	LC 50	Daphnia	1 mg/l
Fish	LC50	Bluegill (Lepomis macrochirus)	0.6 mg/l, 48 hours

Persistence and Degradability:

No data available on degradability of this product.

Bioaccumulation:

No information available.

Mobility in soil:

No information available.

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 13. Disposal Considerations

Disposal instructions	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. This material and its container must be disposed of as hazardous waste. Do not allow this material to drain into sewers/water supplies. Do not contaminate ponds, waterways or ditches with chemical or used container. Dispose of contents/container in accordance with local/regional/national/international regulations.
Hazardous waste code	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
Waste from residue/unused products	Dispose of in accordance with local regulations. Empty containers or liners may retain some product residues. This material and its container must be disposed of in a safe manner (see: Disposal instructions).
Contaminated packaging	Since emptied containers may retain product residue, follow label warnings even after container is emptied. Empty containers should be taken to an approved waste handling site for recycling or disposal.

Section 14. Transport Information

DOT

UN Number	UN1791
UN proper shipping name	Hypochlorite solutions
Transport hazard class(es)	
Class	8
Subsidiary risk	
Packing group	III
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Special provisions	IB3, N34, TP2, TP24
Packaging exceptions	154
Packaging non-bulk	203
Packaging bulk	241

IATA

UN Number	UN1791
UN proper shipping name	Hypochlorite solutions
Transport hazard class(es)	
Class	8
Subsidiary risk	
Label(s)	8
Packing group	III
Environmental hazards	Yes
ERG Code	8L
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.

IMDG

UN Number	UN1791
UN proper shipping name	Hypochlorite solutions
Transport hazard class(es)	
Class	8
Subsidiary risk	
Label(s)	8
Packing group	III
Environmental hazards	Yes
Marine pollutant	Yes
EmS	F-A, S-B
Special precautions for user	Read safety instructions, SDS and emergency procedures before handling.
Transport in bulk according to Annex II of MARPOL 73/78 and IBC Code	

Section 15. Regulatory Information

US Federal Regulations

This product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.
All components are on the U.S. EPA TSCA Inventory List.

CERCLA Hazardous Substance: Sodium Hypochlorite, CAS # 7681-52-9, RQ = 100 lbs.
CERCLA Hazardous Substance: Sodium Hydroxide, CAS # 1310-73-2, RQ = 1000 lbs.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D) - Not regulated

OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

CERCLA Hazardous Substance List (40 CFR 302.4)

Sodium hydroxide (CAS 1310-73-2)	Listed
Sodium hypochlorite (CAS 7681-52-9)	Listed

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories

Immediate Hazard	Yes
Delayed Hazard	No
Fire Hazard	No Pressure
Pressure Hazard	No Reactivity
Hazard	No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous chemical	Yes

SARA 313 (TRI reporting) Not regulated

Other federal regulations:

Clean Air Act (CAA) Section 112 Hazardous Air Pollutants (HAPs) List
Not regulated.

Clean Air Act (CAA) Section 112(r) Accidental Release Prevention (40 CFR 68.130)
Not regulated.

Safe Drinking Water Act (SDWA) Not regulated

US State Regulations

US. Massachusetts RTK - Substance List

Sodium hydroxide (CAS 1310-73-2)
Sodium hypochlorite (CAS 7681-52-9)

US. New Jersey Worker and Community Right-to-Know Act

Sodium hydroxide (CAS 1310-73-2) Sodium hypochlorite (CAS 7681-52-9)

US. Pennsylvania Worker and Community Right-to-Know Law

Sodium hydroxide (CAS 1310-73-2)
Sodium hypochlorite (CAS 7681-52-9)

US. Rhode Island RTK

Sodium hydroxide (CAS 1310-73-2)
Sodium hypochlorite (CAS 7681-52-9)

US. California Proposition 65

This product is not listed, but it may contain elements known to the State of California to cause cancer or reproductive toxicity as listed under Proposition 65 Safe Drinking Water and Toxic Enforcement Act. For additional information, contact Olin Technical Services (800-299-6546).

International Inventories:

Country(s) or Region	Inventory Name	On Inventory (Yes/No)*
Australia	Australian Inventory of Chemical Substances (AICS)	Yes
Canada	Domestic Substances List (DSL)	Yes
Canada	Non-Domestic Substances List (NDSL)	No
China	Inventory of Existing Chemical Substances in China (IIECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELNCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemical Substances List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippines Inventory of Chemical Substances (PICCS)	Yes
United States and Puerto Rico	Toxic Substances Control Act (TSCA)	

*"Yes" indicates this product complies with the inventory requirements administered by the governing country(ies).

*"No" indicates that one or more components of the product are not listed or exempt from listing on the inventory administered by the governing country(s).

Section 16. Other Information

National Fire Protection Association (NFPA) Ratings

Prepared By:	HSE Department
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