X4 Environmental Inc.
A NATURE RESTORATION COMPANY

X4JH2000 Product Description

X4JH2000 is a proprietary blend of non-toxic, biodegradable, non-flammable, water-soluble chemicals, combined with selected nutrients. It can be customized for a variety of specific applications. The base product is widely utilized for numerous environmental and industrial purposes.

- **In-situ soil remediation and emergency oil spill response**
  - **Applied by spraying apparatus or mixing on or into media using the excavator and 2-inch discharge hose, fire nozzle, water pump; and water truck. Mixing solution into contaminated media, The TPH level can be reduce as much as 95% within just 24-48 hours.**

- **Drill Cuttings Washing**
  - **Washing drill cuttings with X4JH2000-HEP, the TPH level can be reduced to or less than 1%, and treated drill cuttings will be safe to discharge or use for road base.**

- **Quartz sand and Corundum recycling treatment**
  - **Our oil sludge reduction device, combined with X4JH2000, is designed to recover used quartz sand and corundum filter materials commonly used in hydrocarbon processing plants. This unique method allows for the recovery of up to 98.73% of filter materials, significantly enhancing cost-effectiveness.**

    Additionally, the same technique can be applied to reclaim oil from large contaminated areas, such as desert spills caused by various incidents.

Reduction Skid-mounted Device

- **Extinguishing Hydrocarbon Fire**
  - **Extinguish hydrocarbon fires effectively using X4JH2000-HEP with a discharge hose, fire nozzle, or pressure washer. After applying the solution to the hydrocarbon fire, cover the surface thoroughly and saturate the surrounding air to suppress vapors for degassing. The effect is immediate, ensuring the hydrocarbons cannot reignite.**

Benefits

Reduction of TPH (Total Petroleum Hydrocarbons) in soils, drill cuttings, water, mill scale, and any hydrocarbon-contaminated media. Using X4JH2000-HEP.

X4JH2000 can reduce the TPH levels in contaminated media by as much as 95% within just 24-48 hours.

Standards of Conformance Covered by:

USEPA (United States Environmental Protection Agency).
LC-50 Aquatic Toxicity Test.
USEPA 8260B.
USEPA 8270C.

TCEQ (Texas Commission of Environmental Quality).
Texas 1005 TPH (Total Petroleum Hydrocarbons)

ECHA (European Chemicals Agency)

Regional:

South America
Republic of China
United States of America
Oceania
Italy

X4JH2000

SAFETY DATA SHEET

Date Prepared: 11/3/2017
Supersedes Date: New

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Identifier:	**X4JH2000-HEP**
Chemical Family:	Mixture
Product Use/Description:	Hydrocarbon Remediation enhancement Product
Restricted Use(s):	Avoid use in food and food products.
Company Identification:	X4 Environmental Inc.
Address:	6100 Corporate Dr. Suite 399 Houston, Texas 77036
Phone:	(832) -4984 (For Product Information)
SDS Preparer:	Manufacturer (832) 247-4984

For Chemical Emergency (Spill, Leak, Fire, Exposure, or Accident) Call Benchmark Day or Night
Within USA and Canada: (832) 247-4984
Outside USA and Canada: (832) 247-4984

2. HAZARDS IDENTIFICATION

Classification
Not a hazardous substance or mixture.

Signal Word
Non Hazardous

Hazard Statements
Causes slight eye irritation

Precautionary Statements
Do not eat, drink or smoke when using this product.

Label Pictograms
NONE

3. COMPOSITION / INFORMATION ON INGREDIENTS

CONTAINING: HAZARDOUS AND/OR REGULATED COMPONENTS

Chemical Name	Percentage	CAS Number
Water	86 – 92%	7732-18-5
Proprietary Surfactant Blend	8 – 14%	Trade Secrets

Some items on this MSDS may be designated as proprietary and/or trade secrets (TS).

4. FIRST AID MEASURES

Eyes: Immediately flush eyes thoroughly with water. Remove contact lenses. Continue flushing eye for at least 15 minutes, including under lids. If irritation persist seek immediate medical attention.

Skin: In case of contact, immediately wash with plenty of water for at least 5 minutes. Seek medical attention if irritation or redness occurs. Remove contaminated clothing and shoes. Clean contaminated clothing and shoes before re-use.

Ingestion: Do not give victim anything by mouth. Do not attempt to dilute by drinking water. Do not induce vomiting without medical advice. Seek immediate medical attention. Do not leave victim unattended. Vomiting may occur spontaneously. To prevent aspiration of swallowed product, lay victim on side with head lower than waist.

Inhalation: If respiratory irritation or distress occurs remove victim to fresh air. Seek medical attention if respiratory irritation or distress continues. If breathing is difficult, give oxygen. If breathing as ceased apply artificial respiration using oxygen and a suitable mechanical device such as a bag and a mask.

Notes to Physician: All treatments should be based on observed signs and symptoms of distress in the patient. Consideration should be given to the possibility that overexposure to materials other than this product may have occurred.

5. FIRE FIGHTING MEASURES

Hazardous Combustion Products – Oxides of carbon.
Unusual Fire & Explosion Hazards – None known.
Extinguishing Media – Use dry chemical, carbon dioxide, foam, and/or water fog.
Special Firefighting Procedures – Use full fire bunker assembly with SCBA, water spray for exposure protection.
Auto Ignition Temperature – Not Applicable

6. ACCIDENTAL RELEASE MEASURES

Containment of Spill: Dike or retain dilution water or water from firefighting for later disposal. Follow procedure described below under cleanup and disposal of spills.

Cleanup and Disposal of Spill: Vacuum or pump into an appropriate storage container. For smaller spills, use absorbent materials and dispose of properly. If diluting with water, collection water runoff for proper disposal per the Federal and State regulations.

Environmental and Regulatory Reporting Spills may be reportable to the National Response Center (1-800-424-8802) and to state and/or local agencies.

7. HANDLING AND STORAGE

Minimum/Maximum Storage Temperature: Store at temperatures of 35ºF to 120ºF (4ºC to 49ºC)

Handling: Avoid inhalation or contact with eyes, skin, or clothing. Avoid prolonged or repeated exposure. Use with adequate ventilation. Wash contaminated clothing before reuse.

Storage: Store in an area that is dry, well-ventilated and in tightly closed containers. Store the product in original container or appropriate end-use container.

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Exposure Guidelines: Not determined.

Engineering Controls: Where engineering controls are indicated by the conditions involving the use of the product or a potential for excessive exposure exists, the following traditional exposure techniques may be used to effectively minimize employee exposures:

Eye Protection: When engaged in activities where product could contact the eye, wear safety glasses with side shields or goggles.

Skin Protection: Skin contact should be minimized through use of latex gloves and suitable long-sleeved chemical splash clothing.

Respiratory Protection: Avoid actions that cause vapor exposure to occur. Use local or general ventilation to control exposures below applicable exposure limits.

Ventilation: Use local exhaust or general dilution ventilation to control exposure within applicable limits.

Work Practice Controls:

Personal hygiene is an important workplace practice exposure-control measure. The following general measures should be taken when working with or handling this material:

(1) Do not store, use, and/or consume foods, beverages, tobacco products, or cosmetics in areas where this material is stored.
(2) Wash hands and face carefully before eating, drinking, using tobacco, applying cosmetics, or using the toilet.
(3) Wash exposed skin promptly to remove accidental splashes or contact with this material.

9. PHYSICAL AND CHEMICAL PROPERTIES

Appearance – Clear Blue liquid
Odor – bland
Physical State – Liquid
Density – **8.32** lbs./gal
Specific Gravity (H2O=1) – 0.99 - 1.00
pH – 6.5 – 7.5
Odor Threshold – Not Evaluated
Vapor Density – Not available
Flammability (solid/gas) – Not Applicable
Lower/Upper Flammability/Explosive Limits– Not Applicable
Partition Coefficient (n-octanol/water) – Not Available

Vapor Pressure – Not determined
Flash Point-Does not flash
Boiling Point – **212 F**
Melting Point – -Not determined
Autoignition Temp – Not determined
Solubility in Water – **soluble**
Evaporation Rate – 1
Decomposition Temperature– Not Evaluated

10. STABILITY AND REACTIVITY

Stability: Stable under normal conditions.

Conditions to avoid: Extremes of temperature and direct sunlight.

Hazardous Polymerization: Hazardous polymerization will not occur.

Incompatibility with other materials: Strong oxidizing agents, acids.

Hazardous Decomposition: Oxides of carbon.

11. TOXICOLOGICAL INFORMATION

Acute Eye and Skin Toxicity Data:
Toxicological Information and Interpretation: Not determined.

Teratology: This product has not been evaluated for fetotoxic and teratogenic effects in animals at concentrations that produce maternal toxicity.

Mutagenicity: Not evaluated

Reproduction: Not evaluated

Chronic Toxicity:
This product does not contain substances that are considered by OSHA, NTP, IARC or ACGIH to be "probable" or "suspected" human carcinogens.

12. ECOLOGICAL INFORMATION

Ecotoxicity: No data found for product.

Chemical Fate Information: No data found for product.

Ecotoxicity: This product has potential ecotoxcity in the event of exposure to aquatic organisms and systems.

Bioaccumulative Potential: No data found for product.

13. DISPOSAL CONSIDERATIONS

Waste Disposal: Chemical additions, processing or otherwise altering this material may make the waste management information presented in this MSDS incomplete, inaccurate, or otherwise inappropriate. Dispose of waste material according to local, state, and federal regulations.

Container Disposal Method: Emptied container may contain product residue and should not be reused.

14. TRANSPORTATION INFORMATION

Department of Transportation (DOT): NOT REGULATED AS DANGEROUS OR HAZARDOUS MATERIAL.

International Air Transport Association (IATA): **NOT REGULATED AS DANGEROUS OR HAZARDOUS MATERIAL.**

15. REGULATORY INFORMATION

Federal Regulatory Status:

Status under OSHA Hazard Communication Standard, 29 CFR 1910.1200: This product is not considered a "hazardous chemical" under this regulation.

Reportable Quantities Under the Clean Water Act, CERCLA, and EPCRA, 40 CFR 117, 302 and 355:
The product does not contain components regulated under this section.

Hazard Category and Applicability of EPCRA Hazardous Substance Inventory Reporting, 40 CFR 370:
The product does not contain components regulated under this section.

Applicability of EPCRA Toxic Chemical Release Inventory (TRI) Reporting, 40 CFR 372: N/A

Status Under the Toxic Substances Control Act, 40 CFR 710:
All chemical(s) comprising this product are either exempt or listed on the TSCA Inventory.

Drug Enforcement Administration (DEA):
Not regulated under 21 CFR 1310.02(b) and 1310.04(f)(2) or 21 CFR 1310.12.

SARA Title III Hazard Classes:

Acute Health Hazard:	No
Chronic Health Hazard:	No
Fire Hazard:	No
Reactive Hazard:	No
Release of Pressure:	No

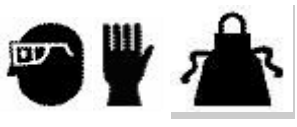
16. OTHER INFORMATION

NFPA Ratings: Health: **1** Flammability: **0** Reactivity: **0**

Hazardous Material Information System (HMIS):	**Health**	**1**
	Flammability	**0**
	Physical Hazard	**0**
	Personal Protection	**C**

NFPA/HMIS Definitions: 0-Least, 1-Slight, 2-Moderate, 3-High, 4-Extreme

Protective Equipment: C (Safety glasses, gloves, and chemical splash apron)



Preparation Date 06-November-2015
Revision Summary New SDS

ADDITIONAL INFORMATION:

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END OF SDS