MATERIAL SAFETY DATA SHEET

1 – CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Name: **Hydrex 9209**

Product Application: Thermal Desalination Antiscalant

Manufacturer: Veolia Water Technologies - Saudi Limited
P.O. BOX 58515, Riyadh 11515, Kingdom of Saudi Arabia
Telephone: 011 478 70 01. Fax: 011 478 25 60
www.middle-east.veoliawatertechnologies.com

Emergency Telephone Number:

Riyadh - KSA 011 478 70 01

2 – COMPOSITION INFORMATION ON INGREDIENTS

Chemical Name	CAS No.	Active Solid Content % W
Polymaleic acid	26099-09-2	34 – 38
Polymer	-	

3 – HAZARDS IDENTIFICATION

Potential Health Effects:

Likely routes of exposure: Eye and skin contact.

Eye contact: Moderately irritating to eyes.

Skin contact: Moderately irritating to skin.

Inhalation: Moderately irritating if inhaled.

Ingestion: Slightly toxic if swallowed small amount (less than a mouthful).

4 – FIRST AID MEASURES

As a general rule, in case of doubt or if symptoms persist, always call a doctor. NEVER induce swallowing in an unconscious person.

If in eyes: Wash thoroughly with soft, clean water for 15 minutes holding eyelids open. Refer the patient to an ophthalmologist, in particular if there is any redness, pain or visual impairment.

If on skin: Immediately flush the area with plenty of water.
Remove contaminated clothing.
Get medical attention.
Wash contaminated clothing before re-use.

If inhaled: Immediate first aid is not likely to be required. If symptoms occur, remove to fresh air.

If swallowed: If the quantity is small (no more than one mouthful), rinse the mouth with water and consult a doctor immediately.

5 – FIRE- FIGHTING MEASURES

Flash Point: Non-flammable.

Extinguishing Media: Water spray, foam, dry chemical, or carbon dioxide.

Fire & Explosion Procedures: Move container from fire area if it can be done without risk. Cool containers exposed to flames with water until well after the fire is out. Keep run-off water out of sewers and water sources. Dike for water control.

6 – ACCIDENTAL RELEASE MEASURES

Personal Precautions:	Use personal protection recommended in section 8.
Environmental Precautions:	Keep out of drains and water courses.
Spill Clean up Methods:	Contain large spills with dikes and transfer the material to appropriate containers for reclamation or disposal. Absorb remaining material or small spills with an inert material and then place in a chemical waste container. Flush spill area with water.

7 – HANDLING AND STORAGE

Handling:
Observe precautions stated on label and also industrial safety regulations. Avoid contact of product with the skin and eyes. Smoking, eating and drinking are prohibited in premises where the preparation is used.
Emptied containers retain vapour and product residue. Observe all recommended safety precautions until container is cleaned, reconditioned or destroyed. The reuse of this material's container for non industrial purposes is prohibited and any reuse must be in consideration of the data provided in this material safety data sheet.

Storage:
Stable under normal conditions of handling and storage. Freeze sensitive.

8 – EXPOSURE CONTROLS/PERSONAL PROTECTION

Protective Equipment:



Eye Protection:	Wear safety goggles. Provide eye washes in workshops where the product is constantly handled.
Hand protection:	Protective creams may be used for exposed skin, but they should be applied after contact with the product.
Body Protection:	Although this product does not present a significant skin concern, minimize skin contamination by following good industrial practice. Wash thoroughly after handling.
Respiratory Protection:	Avoid breathing vapour or mist. Use approved respiratory protection equipment when airborne exposure is excessive. Consult the respirator manufacturer to determine the appropriate type of equipment for a given application. The respirator use limitations specified by the manufacturer must be observed.
Ventilation:	Provide natural or mechanical ventilation to minimize exposure. If practical, use local mechanical exhaust ventilation at sources of air contamination such as processing equipment.

9 – PHYSICAL AND CHEMICAL PROPERTIES

Appearance	:	Clear
State	:	Liquid
Color	:	Light amber
Odor Characteristic	:	Not specified
pH of concentrate	:	7.0 – 9.0
Specific Gravity @ 25°C	:	1.29 – 1.33
Viscosity, mPa.s	:	12 – 35 at 25 °C
Melting Point, (°C)	:	NA
Boiling Point, (°C)	:	>100
Freezing point, (°C)	:	0 to -5
Vapour pressure @ 20°C	:	17.5 mm Hg (water)
Solubility in Water	:	Completely miscible

10 – STABILITY AND REACTIVITY

Stability:	Stable under normal conditions of handling and storage.
Conditions to avoid:	None known
Material to avoid:	Contact with strong alkalais.
Hazardous decomposition products:	Carbon Monoxide (CO); Carbon Dioxide

11 – TOXICOLOGICAL INFORMATION

This product has not been tested for toxicity, but data obtained on similar products are summarised below:

Acute animal toxicity data

Oral:	LD50, rat, 15,000 mg/kg, practically nontoxic following oral administration.
Eye irritation:	rabbit, severely irritating,
Skin irritation:	rabbit, Moderately irritating to skin.,
Skin sensitization:	guinea pig, Produced no dermal sensitization (guinea pigs).

Repeat dose toxicity: rat, subchronic,
No adverse effects reported in repeat dose studies.

Mutagenicity: No genetic effects were noted in standard bacterial tests

12 – ECOLOGICAL INFORMATION

Environmental Toxicity:

Invertebrates	48 h, EC50 Water flea (Daphnia magna) > 1000 mg/l
Fish:	96 h, LC50 Rainbow trout (Oncorhynchus mykiss) > 100 mg/l
	96 h, LC50 Common carp (Cyprinus carpio) > 100 mg/l

Environmental fate

Biodegradation	Zahn-Wellens (OECD 302B) 18 % 35 d
	Biodegrades slowly in the environment.

Bioconcentration factor (BCF): not expected to bioaccumulate

13 – DISPOSAL CONSIDERATIONS

Waste Management:
Do not pour into drains or waterways.

Disposal Methods:
Local, state, provincial, and national disposal regulations may be more or less stringent. Consult your attorney or appropriate regulatory officials for information on such disposal. This product should not be dumped, spilled, rinsed or washed into sewers or public waterways.

14 – TRANSPORT INFORMATION

UN Number:	Non-Hazardous
Proper Shipping Name:	Non-Hazardous
IMDG Class:	Non-Hazardous
Packing Group:	Non-Hazardous

15 – REGULATORY INFORMATION

This preparation was classified in compliance with the directive known as <All preparations> 1999/45/EC and its adaptations
In addition directive 2004/73/EC with the 29° adaptation of directive 67/548/EEC (Hazardous substances) have been taken into account.

Particular hazards associated with the risk and safety recommendations:

R36/38	Irritating to eyes and skin
S26	In case of contact with eyes, rinse immediately with plenty of water and seek medical advice
S37	Wear suitable gloves
S60	This material and its containers must be disposed of as hazardous waste.

Product Label (s):

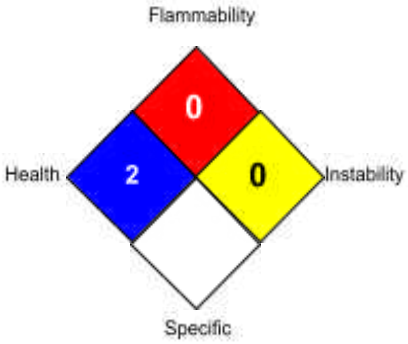


16 – OTHER INFORMATION

HMIS Rating

HEALTH	2
FLAMMABILITY	0
PHYSICAL HAZARD	0
PERSONAL PROTECTION	C

NFPA 704 Rating



HMIS: Hazardous Materials Identification System
NFPA: National Fire Protection Association

Since the user's working conditions are not known by us, the information supplied on this safety data sheet is based on our current level of knowledge and on national and community regulations.

The product must not be used for any purposes other than those specified under heading 1 without first obtaining written handling instructions.

It is at all times the responsibility of the user to take all necessary measures to comply with legal requirements and local regulations.

The information given on this safety data sheet must be regarded as a description of the safety requirements relating to our product and not a guarantee of its properties