SAFETY DATA SHEET



1. Identification

Product identifier NARTAR XR UI; NARTAR XR

Other means of identification

Brand Code 334A, 496A

Recommended use For Industrial Use Only

Recommended restrictions None known.

Manufacturer/Supplier information

Manufacturer

Company name HarbisonWalker International

Address 1305 Cherrington Parkway, Suite 100

Moon Township, Pennsylvania 15108 US

Telephone General Phone: 412-375-6600

Website www.thinkHWI.com

Emergency phone number CHEMTREC 24 HOUR 1-800-424-9300

EMERGENCY #

2. Hazard(s) identification

Classified hazards

This item is defined as an article per OSHA (29 CFR 1910.1200) and is therefore exempt from labeling. A Safety Data Sheet is available.

This item is not hazardous per OSHA 29 CFR 1910.1200(c). However, individual customer processes (such as grinding, sawing, or blasting) may result in the formation of dust that may present health hazards. May cause respiratory irritation, lung injury, or cancer by inhalation. Limit skin contact. Wash hands after handling. Dispose of waste and residues in accordance with local authority requirements. Wear protective gloves/protective clothing/eye protection. Dust may cause cancer.

Label elements

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Hazard(s) not otherwise classified (HNOC)

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3. Composition/information on ingredients

Mixtures

Chemical name	Common name and synonyms	CAS number	%	
Magnesium Oxide		1309-48-4	90 - 100	
Zirconium Dioxide		1314-23-4	1 - 2.5	

^{*}Designates that a specific chemical identity and/or percentage of composition has been withheld as a trade secret.

4. First-aid measures

Inhalation Move to fresh air. Call a physician if symptoms develop or persist.

Skin contact Wash off with soap and water. Get medical attention if irritation develops and persists.

Eye contact Rinse with water. Get medical attention if irritation develops and persists.

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Ingestion Rinse mouth. Get medical attention if symptoms occur.

Most important symptoms/effects, acute and delayed

Coughing.

Indication of immediate medical attention and special treatment needed

Provide general supportive measures and treat symptomatically. Keep victim under observation. Symptoms may be delayed.

General information

If concerned: Get medical advice. Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.

5. Fire-fighting measures

Suitable extinguishing media

Use fire-extinguishing media appropriate for surrounding materials.

Unsuitable extinguishing media

Not available.

Specific hazards arising from

Not applicable.

the chemical

Not available.

Special protective equipment and precautions for firefighters

6. Accidental release measures

Personal precautions, protective equipment and emergency procedures Keep unnecessary personnel away. Keep people away from and upwind of spill/leak. Wear appropriate protective equipment and clothing during clean-up. Ensure adequate ventilation. Local authorities should be advised if significant spillages cannot be contained. For personal protection, see section 8 of the SDS.

Methods and materials for containment and cleaning up Environmental precautions

Stop the flow of material, if this is without risk. Following product recovery, flush area with water. For waste disposal, see section 13 of the SDS.

Avoid discharge into drains, water courses or onto the ground.

7. Handling and storage

Precautions for safe handling

Obtain special instructions before use. Do not handle until all safety precautions have been read and understood. Avoid prolonged exposure. Should be handled in closed systems, if possible. Provide adequate ventilation. Wear appropriate personal protective equipment. Observe good industrial hygiene practices.

Conditions for safe storage, including any incompatibilities

Store locked up. Store in original tightly closed container. Store away from incompatible materials (see Section 10 of the SDS).

8. Exposure controls/personal protection

Occupational exposure limits

Components	Туре	Value	Form
Magnesium Oxide (CAS 1309-48-4)	PEL	15 mg/m3	Total particulate.
Zirconium Dioxide (CAS 1314-23-4)	PEL	5 mg/m3	
US. ACGIH Threshold Lim	it Values		
Components	Туре	Value	Form
Magnesium Oxide (CAS 1309-48-4)	TWA	10 mg/m3	Inhalable fraction.
Zirconium Dioxide (CAS 1314-23-4)	STEL	10 mg/m3	
	TWA	5 mg/m3	
US. NIOSH: Pocket Guide	to Chemical Hazards		
Components	Туре	Value	
Zirconium Dioxide (CAS 1314-23-4)	STEL	10 mg/m3	
	TWA	5 mg/m3	
ogical limit values	No biological exposure limits noted for the ingredient(s).		

Exposure guidelines

Zirconium silicates (zircon sands) contain trace amounts (106-120 pCi/g) of naturally occurring radioactive uranium and thorium. Overexposure by inhalation to respirable dust containing uranium and thorium may cause lung cancer. Eye contact with the dust may cause eye irritation. Measurements made by Dupont during the use of a similar mineral sand indicated the observance of the 5 mg/m3 OSHA PEL for respirable dust and/or the PEL for quartz ensures the user is below the exposure limits established for uranium and thorium. No LD50 or LC50 can be found for zircon sand.

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 not been established, maintain airborne levels to an acceptable level.

Individual protection measures, such as personal protective equipment

Eye/face protection If contact is likely, safety glasses with side shields are recommended.

Skin protection

Hand protection Wear appropriate chemical resistant gloves.Other Use of an impervious apron is recommended.

exceeding the exposure limits.

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.

9. Physical and chemical properties

Appearance

Physical state Solid.
Form Solid

Color Not available.

Odor Not available.

Odor threshold Not available.

PH Not available.

Melting point/freezing point Not available.

Initial boiling point and boiling Not available.

range

Flash point Not available.

Evaporation rate Not available.

Flammability (solid, gas) Not available.

Upper/lower flammability or explosive limits

Flammability limit - lower

Not available.

(%)

Flammability limit - upper

Not available.

(%)

Explosive limit - lower (%)

Explosive limit - upper (%)

Vapor pressure

Vapor density

Not available.

Not available.

Not available.

Not available.

Not available.

Solubility(ies)

Solubility (water) Not available.

Partition coefficient Not available.

(n-octanol/water)

Auto-ignition temperatureNot available.Decomposition temperatureNot available.ViscosityNot available.

10. Stability and reactivity

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

Chemical stability Material is stable under normal conditions.

Possibility of hazardous

reactions

No dangerous reaction known under conditions of normal use.

Conditions to avoid Contact with incompatible materials.

Incompatible materials Phosphorus. Chlorine.

Incompatibility is based strictly upon potential theoretical reactions between chemicals and may

not be specific to industrial application exposure. Contact your sales representative for

clarification.

Hazardous decomposition

products

No hazardous decomposition products are known.

11. Toxicological information

Information on likely routes of exposure

Inhalation Prolonged inhalation may be harmful.

Skin contact

No adverse effects due to skin contact are expected.

Eye contact

Direct contact with eyes may cause temporary irritation.

Ingestion Expected to be a low ingestion hazard.

Symptoms related to the physical, chemical and toxicological characteristics Coughing.

Information on toxicological effects

Acute toxicity Not available.

Skin corrosion/irritation Prolonged skin contact may cause temporary irritation.

Serious eye damage/eye Direct contact with eyes may cause temporary irritation.

irritation

Respiratory or skin sensitization

Respiratory sensitization Not a respiratory sensitizer.

Skin sensitization This product is not expected to cause skin sensitization.

Germ cell mutagenicityNo data available to indicate product or any components present at greater than 0.1% are

mutagenic or genotoxic.

Carcinogenicity May cause cancer.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Reproductive toxicityThis product is not expected to cause reproductive or developmental effects.

Specific target organ toxicity -

single exposure

Not classified.

Specific target organ toxicity -

repeated exposure

Not classified.

Aspiration hazard Not an aspiration hazard.

Chronic effects Prolonged inhalation may be harmful.

12. Ecological information

Ecotoxicity The product is not classified as environmentally hazardous. However, this does not exclude the

possibility that large or frequent spills can have a harmful or damaging effect on the environment.

Persistence and degradability No data is available on the degradability of this product.

Bioaccumulative potential No data available.

Mobility in soil No data 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.

13. Disposal considerations

Disposal instructionsThis product, in its present state, when discarded or disposed of, is not a hazardous waste

according to Federal regulations (40 CFR 261.4 (b)(4)). Under RCRA, it is the responsibility of the user of the product to determine, at the time of disposal, whether the product meets RCRA criteria

for hazardous waste.

Hazardous waste code

Waste from residues / unused

products

Not applicable.

Contaminated packaging

Not available.

Not applicable.

14. Transport information

DOT

Not regulated as dangerous goods.

IATA

Not regulated as dangerous goods.

IMDG

Not regulated as dangerous goods.

Transport in bulk according to

Annex II of MARPOL 73/78 and

the IBC Code

15. Regulatory information

US federal regulationsThis product is a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Standard, 29 CFR 1910.1200. All chemical substances in this product are listed on the TSCA

chemical substance inventory where required.

TSCA Section 12(b) Export Notification (40 CFR 707, Subpt. D)

Not regulated.

CERCLA Hazardous Substance List (40 CFR 302.4)

Not listed.

SARA 304 Emergency release notification

Not regulated.

US. OSHA Specifically Regulated Substances (29 CFR 1910.1001-1050)

Not listed.

Superfund Amendments and Reauthorization Act of 1986 (SARA)

Hazard categories Immediate Hazard - No

Delayed Hazard - Yes Fire Hazard - No Pressure Hazard - No Reactivity Hazard - No

SARA 302 Extremely hazardous substance

Not listed.

SARA 311/312 Hazardous No

chemical

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

Not regulated.

(SDWA)

US state regulations

US. California Controlled Substances. CA Department of Justice (California Health and Safety Code Section 11100)

Not listed.

US. Massachusetts RTK - Substance List

Magnesium Oxide (CAS 1309-48-4) Zirconium Dioxide (CAS 1314-23-4)

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

Magnesium Oxide (CAS 1309-48-4)

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

Magnesium Oxide (CAS 1309-48-4)

US. Rhode Island RTK

Not regulated.

US. California Proposition 65

California Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65): This material is not known to contain any chemicals currently listed as carcinogens or reproductive toxins.

International Inventories

Inventory name	On inventory (yes/no)*
Australian Inventory of Chemical Substances (AICS)	No
Domestic Substances List (DSL)	Yes
Non-Domestic Substances List (NDSL)	No
Inventory of Existing Chemical Substances in China (IECSC)	Yes
European Inventory of Existing Commercial Chemical Substances (EINECS)	No
European List of Notified Chemical Substances (ELINCS)	No
Inventory of Existing and New Chemical Substances (ENCS)	Yes
Existing Chemicals List (ECL)	Yes
New Zealand Inventory	Yes
Philippine Inventory of Chemicals and Chemical Substances (PICCS)	No
	Australian Inventory of Chemical Substances (AICS) Domestic Substances List (DSL) Non-Domestic Substances List (NDSL) Inventory of Existing Chemical Substances in China (IECSC) European Inventory of Existing Commercial Chemical Substances (EINECS) European List of Notified Chemical Substances (ELINCS) Inventory of Existing and New Chemical Substances (ENCS) Existing Chemicals List (ECL) New Zealand Inventory Philippine Inventory of Chemicals and Chemical Substances

United States & Puerto Rico Toxic Substances Control Act (TSCA) Inventory

Yes

16. Other information, including date of preparation or last revision

Issue date 07-24-2015

Version # 01

Disclaimer This information is based on our present knowledge on creation date. However, this shall not

constitute a guarantee for any specific product features and shall not establish a legally valid

contractual relationship.

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^{*}A "Yes" indicates that all components of this product comply with the inventory requirements administered by the governing country(s)

A "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).