

## 1. Identification

**Product identifier** NUKOTE FR-BG  
**Other means of identification** None.  
**Recommended use** Fire Retardant Latex Coating  
**Recommended restrictions** None known.

### Manufacturer/Importer/Supplier/Distributor information

#### Supplier

**Company name** Nukote Coating Systems International  
**Address** 2051 Reliance Parkway  
 Bedford, TX 76021  
 832-770-7100  
**Telephone** SDS@nukoteglobal.com  
**Email** Chemtrec:800-424-9300 (account: CCN1217) OR International:703-527-3887  
**Emergency Phone Number** (account:CCN1217)

## 2. Hazard(s) identification

**Physical hazards** Not classified.  
**Health hazards** Not classified.  
**Environmental hazards** Hazardous to the aquatic environment, acute hazard Category 2  
 Hazardous to the aquatic environment, long-term hazard Category 2  
**OSHA defined hazards** Not classified.

### Label elements



**Signal word** None.  
**Hazard statement** Toxic to aquatic life with long lasting effects.  
**Precautionary statement**  
**Prevention** Avoid release to the environment.  
**Response** Collect spillage.  
**Storage** Store away from incompatible materials.  
**Disposal** Dispose of contents/container in accordance with local/regional/national/international regulations.  
**Hazard(s) not otherwise classified (HNOC)** None known.  
**Supplemental information** None.

## 3. Composition/information on ingredients

### Mixtures

Chemical name	CAS number	%
Aluminum oxide	1344-28-1	10 - 25
Zinc Borate	1332-07-6	1 - 5

<b>Composition comments</b>	All concentrations are in percent by weight unless ingredient is a gas. Gas concentrations are in percent by volume. The specific chemical identity and/or exact percentage of component(s) have been withheld as a trade secret. Components not listed are either non-hazardous or are below reportable limits.
<b>4. First-aid measures</b>	
<b>Inhalation</b>	Move to fresh air. Call a physician if symptoms develop or persist.
<b>Skin contact</b>	Wash off with soap and water. Get medical attention if irritation develops and persists.
<b>Eye contact</b>	Rinse with water. Get medical attention if irritation develops and persists.
<b>Ingestion</b>	Rinse mouth. Get medical attention if symptoms occur.
<b>Most important symptoms/effects, acute and delayed</b>	Direct contact with eyes may cause temporary irritation. May cause skin irritation on prolonged or repeated contact. May cause slight respiratory tract irritation.
<b>Indication of immediate medical attention and special treatment needed</b>	Treat symptomatically.
<b>General information</b>	Ensure that medical personnel are aware of the material(s) involved, and take precautions to protect themselves.
<b>5. Fire-fighting measures</b>	
<b>Suitable extinguishing media</b>	Water fog. Foam. Dry chemical powder. Carbon dioxide (CO <sub>2</sub> ).
<b>Unsuitable extinguishing media</b>	Do not use water jet as an extinguisher, as this will spread the fire.
<b>Specific hazards arising from the chemical</b>	During fire, gases hazardous to health may be formed. Carbon monoxide, carbon dioxide and other hydrocarbon fragments.
<b>Special protective equipment and precautions for firefighters</b>	Self-contained breathing apparatus and full protective clothing must be worn in case of fire.
<b>Fire fighting equipment/instructions</b>	In case of fire and/or explosion do not breathe fumes. Prevent runoff from fire control or dilution from entering streams, sewers, or drinking water supply. Move containers from fire area if you can do so without risk.
<b>Specific methods</b>	Use standard firefighting procedures and consider the hazards of other involved materials.
<b>General fire hazards</b>	No unusual fire or explosion hazards noted.
<b>6. Accidental release measures</b>	
<b>Personal precautions, protective equipment and emergency procedures</b>	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.
<b>Methods and materials for containment and cleaning up</b>	This product is miscible in water. Prevent product from entering drains.  Large Spills: Stop the flow of material, if this is without risk. Dike the spilled material, where this is possible. Absorb in vermiculite, dry sand or earth and place into containers. Following product recovery, flush area with water.  Small Spills: Wipe up with absorbent material (e.g. cloth, fleece). Clean surface thoroughly to remove residual contamination.  Never return spills to original containers for re-use. For waste disposal, see section 13 of the SDS.
<b>Environmental precautions</b>	Avoid release to the environment. Inform appropriate managerial or supervisory personnel of all environmental releases. Prevent further leakage or spillage if safe to do so. Avoid discharge into drains, water courses or onto the ground.
<b>7. Handling and storage</b>	
<b>Precautions for safe handling</b>	Avoid inhalation of vapors or mists. Avoid contact with skin and eyes. Avoid prolonged exposure. Provide adequate ventilation. Wear appropriate personal protective equipment. Avoid release to the environment. Observe good industrial hygiene practices.
<b>Conditions for safe storage, including any incompatibilities</b>	Store in tightly closed container. Keep upright. Do not store below 35°F. Do not reuse containers. Store away from incompatible materials (see Section 10 of the SDS).

## 8. Exposure controls/personal protection

### Occupational exposure limits

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

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	PEL	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.

#### US. OSHA Table Z-3 (29 CFR 1910.1000)

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	TWA	5 mg/m <sup>3</sup>	Respirable fraction.
		15 mg/m <sup>3</sup>	Total dust.
		50 mppcf	Total dust.
		15 mppcf	Respirable fraction.

#### US. ACGIH Threshold Limit Values

Components	Type	Value	Form
Aluminum oxide (CAS 1344-28-1)	TWA	1 mg/m <sup>3</sup>	Respirable fraction.

### Biological limit values

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

### Appropriate engineering controls

Good general ventilation 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.

### Individual protection measures, such as personal protective equipment

**Eye/face protection** Wear safety glasses with side shields (or goggles).

#### Skin protection

##### Hand protection

Wear appropriate chemical resistant gloves. Rubber gloves are recommended. Be aware that the liquid may penetrate the gloves. Frequent change is advisable. Other suitable gloves can be recommended by the glove supplier.

#### Skin protection

##### Other

Wear suitable protective clothing.

#### Respiratory protection

In case of insufficient ventilation, wear suitable respiratory equipment. Wear NIOSH approved respirator appropriate for airborne exposure at the point of use. Check with respiratory protective equipment suppliers.

#### 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** Liquid.

**Form** Liquid.

**Color** Green.

**Odor** Not available.

**Odor threshold** Not available.

**pH** 8 - 10

**Melting point/freezing point** Not available.

**Initial boiling point and boiling range** > 212 °F (> 100 °C)

**Flash point** Does not flash.

**Evaporation rate** 1 (n-BuAc=1)

**Flammability (solid, gas)** Not applicable.

### Upper/lower flammability or explosive limits

Flammability limit - lower (%) Not available.

Flammability limit - upper (%) Not available.

Vapor pressure Not available.

Vapor density > 1 (Air=1)

Relative density Not available.

### Solubility(ies)

Solubility (water) Soluble in water.

Partition coefficient (n-octanol/water) Not available.

Auto-ignition temperature Not available.

Decomposition temperature Not available.

Viscosity Not available.

### Other information

Explosive properties Not explosive.

Oxidizing properties Not oxidizing.

VOC 6 g/l

## 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.

**Possibility of hazardous reactions** No dangerous reaction known under conditions of normal use.

**Conditions to avoid** Contact with incompatible materials.

**Incompatible materials** Strong oxidizing agents. Acids. Chlorine.

**Hazardous decomposition products** Carbon monoxide (CO). Carbon dioxide (CO<sub>2</sub>). Fragmented hydrocarbons.

## 11. Toxicological information

### Information on likely routes of exposure

**Inhalation** Inhalation of vapors may cause irritation to respiratory tract.

**Skin contact** May cause skin irritation on prolonged or repeated contact.

**Eye contact** Direct contact with eyes may cause temporary irritation.

**Ingestion** May cause irritation of the gastrointestinal tract.

**Symptoms related to the physical, chemical and toxicological characteristics** Direct contact with eyes may cause temporary irritation. May cause skin irritation on prolonged or repeated contact. May cause slight respiratory tract irritation.

### Information on toxicological effects

**Acute toxicity** Not expected to be acutely toxic.

Components	Species	Test Results
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Aluminum oxide (CAS 1344-28-1)

#### Acute

#### Oral

LD50

Rat

> 5000 mg/kg/day

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

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

### Respiratory or skin sensitization

**Respiratory sensitization** Not a respiratory sensitizer.

**Skin sensitization** Not classified. However: Prolonged or repeated contact may cause skin sensitization in susceptible individuals.

<b>Germ cell mutagenicity</b>	No data available to indicate product or any components present at greater than 0.1% are mutagenic or genotoxic.
<b>Carcinogenicity</b>	Not classifiable as to carcinogenicity to humans.
<b>IARC Monographs. Overall Evaluation of Carcinogenicity</b>	
Not listed.	
<b>NTP Report on Carcinogens</b>	
Not listed.	
<b>OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)</b>	
Not listed.	

<b>Reproductive toxicity</b>	This product is not expected to cause reproductive or developmental effects.
<b>Specific target organ toxicity - single exposure</b>	Not classified.
<b>Specific target organ toxicity - repeated exposure</b>	Not classified.
<b>Aspiration hazard</b>	Not an aspiration hazard.
<b>Chronic effects</b>	Prolonged inhalation may be harmful.

## 12. Ecological information

<b>Ecotoxicity</b>	Toxic to aquatic life with long lasting effects.
<b>Persistence and degradability</b>	The product contains inorganic compounds which are not biodegradable.
<b>Bioaccumulative potential</b>	No data available on bioaccumulation.
<b>Mobility in soil</b>	The product is water soluble and may spread in water systems.
<b>Other adverse effects</b>	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

<b>Disposal instructions</b>	Collect and reclaim or dispose in sealed containers at licensed waste disposal site. 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.
<b>Local disposal regulations</b>	Dispose in accordance with all applicable regulations.
<b>Hazardous waste code</b>	The waste code should be assigned in discussion between the user, the producer and the waste disposal company.
<b>Waste from residues / unused products</b>	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).
<b>Contaminated packaging</b>	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.

## 14. Transport information

### DOT

<b>UN number</b>	UN3082
<b>UN proper shipping name</b>	Environmentally hazardous substances, liquid, n.o.s. (ZINC BORATE RQ = 20000 LBS)
<b>Transport hazard class(es)</b>	
<b>Class</b>	9
<b>Subsidiary risk</b>	-
<b>Label(s)</b>	9
<b>Packing group</b>	III
<b>Environmental hazards</b>	
<b>Marine pollutant</b>	Yes
<b>Special precautions for user</b>	Read safety instructions, SDS and emergency procedures before handling.
<b>Special provisions</b>	8, 146, 335, IB3, T4, TP1, TP29
<b>Packaging exceptions</b>	155
<b>Packaging non bulk</b>	203
<b>Packaging bulk</b>	241

### IATA

<b>UN number</b>	UN3082
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**UN proper shipping name** Environmentally hazardous substance, liquid, n.o.s. (ZINC BORATE)  
**Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards** Yes  
**ERG Code** 9L  
**Special precautions for user** Read safety instructions, SDS and emergency procedures before handling.

**IMDG**

**UN number** UN3082  
**UN proper shipping name** ENVIRONMENTALLY HAZARDOUS SUBSTANCE, LIQUID, N.O.S. (ZINC BORATE)  
**Transport hazard class(es)**  
**Class** 9  
**Subsidiary risk** -  
**Packing group** III  
**Environmental hazards**  
**Marine pollutant** Yes  
**EmS** F-A, S-F  
**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 the IBC Code** Not established.

**15. Regulatory information**

**US federal regulations** This product is not known to be a "Hazardous Chemical" as defined by the OSHA Hazard Communication Standard, 29 CFR 1910.1200.

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

Not regulated.

**CERCLA Hazardous Substance List (40 CFR 302.4)**

Zinc Borate (CAS 1332-07-6) Listed.

**SARA 304 Emergency release notification**

Not regulated.

**OSHA Specifically Regulated Substances (29 CFR 1910.1001-1053)**

Not listed.

**Toxic Substances Control Act (TSCA)** All components of the mixture on the TSCA 8(b) inventory are designated "active".

**Superfund Amendments and Reauthorization Act of 1986 (SARA)**

**SARA 302 Extremely hazardous substance**

Not listed.

**SARA 311/312 Hazardous chemical** No

**SARA 313 (TRI reporting)**

Chemical name	CAS number	% by wt.
Aluminum oxide	1344-28-1	10 - 25
Zinc Borate	1332-07-6	1 - 5

**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**

Aluminum oxide (CAS 1344-28-1)  
 Zinc Borate (CAS 1332-07-6)

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

Aluminum oxide (CAS 1344-28-1)

Zinc Borate (CAS 1332-07-6)

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

Aluminum oxide (CAS 1344-28-1)

Zinc Borate (CAS 1332-07-6)

**US. Rhode Island RTK**

Aluminum oxide (CAS 1344-28-1)

**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. For more information go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov).

**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 (IECSC)	Yes
Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Yes
Europe	European List of Notified Chemical Substances (ELINCS)	No
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Yes
Korea	Existing Chemicals List (ECL)	Yes
New Zealand	New Zealand Inventory	Yes
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Yes
Taiwan	Taiwan Chemical Substance Inventory (TCSI)	Yes
United States & Puerto Rico	Toxic Substances Control Act (TSCA) Inventory	Yes

\*A "Yes" indicates this product complies 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).

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

**Issue date** 07-October-2020

**Revision date** -

**Version #** 01

**Further information** B - Safety Glasses, Gloves

**HMIS® ratings**  
 Health: 0  
 Flammability: 0  
 Physical hazard: 0  
 Personal protection: B

**Disclaimer** NuKote Coating Systems cannot anticipate all conditions under which this information and its product, or the products of other manufacturers in combination with its product, may be used. It is the user's responsibility to ensure safe conditions for handling, storage and disposal of the product, and to assume liability for loss, injury, damage or expense due to improper use. The information in the sheet was written based on the best knowledge and experience currently available.