FIRE RETARDANT - RUBBER GUARD

FLAME SEAL RG™

SAFETY DATA SHEET

SECTION 1 PRODUCT & COMPANY INFORMATION

1.1	**Product Identifier**	
	Product Name	**FLAME SEAL RG™ RUBBER GUARD**
	Brand	Flame Seal Products, Inc.
	CAS #	NA
1.2	**Relevant identified uses of the substance or mixture and uses advised against**	
	Identified uses	Intumescent fire retardant coating.
1.3	**Details of the Supplier of the Safety Data Sheet**	
	Company	Flame Seal Products, Inc. 15200 West Drive Houston, TX 77053 USA
	Telephone	713-668-4291
	Fax	713-668-1724
1.4	**Emergency telephone number**	
	Emergency #	**800-424-9300**

SECTION 2 HAZARDS IDENTIFICATION

2.1 Classification of the substance or mixture

GHS Classification in accordance with 29 CFR 1910 (OSHA HCS)

Skin irritant, eye irritant

2.2 GHS Label Elements, including precautionary statements

Hazard Statements	**WARNING**
H316 : 3	Causes mild skin irritation.
H320 : 2B	Causes eye irritation.
Precautionary Statements	
P202	Do not handle until all safety precautions have been read and understood.
P264	Wash skin thoroughly if exposed.
P280	Wear eye/face protection.
P281	Use personal protection equipment as required.
P305 + P351 + P338	In case of eye contact: rinse thoroughly with eyelid(s) held open. Remove contact lenses, if worn.
P332 + 313	If skin irritation occurs: get medical advice/attention.
P337 + P313	If eye irritation persists: get medical advice/attention.

2.3 Hazards not otherwise classified (HNOC) or not covered by GHS

H303	May be harmful if swallowed.

None. For the full text of the H-Statements mentioned in this section, see Section 16.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

3.1 Substances

Formula	*Proprietary aminic phosphate polymer in water		52 +/- 5%
	*Proprietary performance additives (non hazardous)		14 +/- 5%
	Titanium Dioxide	CAS # 13463-67-7	2 +/- 1%
	Water	CAS # 7732-18-5	32 +/- 5%
Hazardous Component	**Classification**		**Concentration**
Aminic phosphate polymer	eye, mild skin irritant		52 +/- 5%

* Components are a Company Trade Secret – Business Confidential. Flame Seal Products Inc. is withholding the specific chemical identity under provision of the OSHA Hazard Communication Rule Trade Secrets (1910.1200(i)(1). The specific chemical identity will be made available to health professionals in accordance with 29 CFR 1910.1200(i)(1)(2)(3)(4).

SECTION 4 FIRST AID MEASURES

4.1 Description of first aid measures

General advice	Use good industrial hygiene procedures.
If inhaled	Not expected to be an issue in low quantities. Wear respirator rated for organic mist in if adequate ventilation is not available.
In case of skin contact	Wash with soap and plenty of water. If irritation occurs, get medical advice/attention.
In case of eye contact	Flush eyes with plenty of fresh water while holding eyelids open. Remove contact lenses if worn. If eye irritation persists, get medical advice/attention.
If swallowed	Do not induce vomiting. Never give anything by mouth to an unconscious person. Flush mouth with water. If conscious give water to further dilute chemical. Consult physician.

4.2	**Most important symptoms and effects, both acute and delayed**	The most important known symptoms and effects are described in the labelling (see section 2.2) or in Section 11.
4.3	**Indication of any immediate medical attention and special treatment needed**	No data available

SECTION 5 FIRE FIGHTING MEASURES

5.1	**Extinguishing media**	Not combustible (use water spray, fog, foam, dry chemicals, CO_2 or other agents as appropriate for material in surrounding fire).
5.2	**Special hazards arising from substance or mixture**	Heating and/or burning may liberate small amounts of ammonia, oxides of nitrogen and phosphorus.
5.3	**Advice for firefighters**	Not combustible (use safety equipment which is suitable for materials in surrounding fire).
5.4	**Further information**	No data available

SECTION 6 ACCIDENTAL RELEASE MEASURES

6.1	**Personal precautions, protective equipment and emergency procedures**	Use personal protective equipment. Avoid breathing mist. Ensure adequate ventilation. Evacuate personnel from affected area. For personal protection, see Section 8.
6.2	**Environmental precautions**	Prevent further leakage or spillage, if safe to do so. Keep out of public sewers and waterways.
6.3	**Methods and materials for containment and cleaning up**	Confine spilled material and absorb with sand, sawdust, earth or other available solids. Sweep up and place in a suitable container for disposal.
6.4	**Reference to other sections**	See Section 13 for further disposal info.

SECTION 7 HANDLING & STORAGE

7.1	Precautions for safe handling	Wear appropriate protective equipment. Provide adequate ventilation. See Sections 2.2 and 8.
7.2	Conditions for safe storage, including any incompatibles	Keep container tightly sealed when not in use. Use good industrial practices to avoid spills.
7.3	Specified end use	Fire protection for shredded media rubber.

SECTION 8 EXPOSURE CONTROL/PERSONAL PROTECTION

8.1	Control Parameters			ACGIH	OSHA
	Titanium Dioxide (respirable form)	CAS # 13463-67-7	EC # 236-675-5	10mg/m3 TLV-TWA respirable fraction 1 mg/m3	15 mg/m3 Total dust 8 hr TWA

Engineering Controls		Handle in accordance with good industrial and safety practices. Wash hands after handling.	
Personal Protection Equipment	Respiratory Protection (Specify Type)	For heavy mist exposure, use a NIOSH/MSHA approved respirator suitable for use with organic vapors if proper ventilation cannot be provided.	
	Remediation or sanding	Contains titanium dioxide which is considered a potential human carcinogen in respirable form. Do not breath dust. Use measures to control dust to published exposure level limits. Otherwise wear NIOSH suitable respirator for hazardous dust – N100, P100, R100 filters.	
	Protective Gloves	Wear impervious gloves as necessary to avoid excessive skin contact (i.e. rubber or neoprene)	
	Eye Protection	Protective glasses or goggles in heavy mist areas.	
	Other Protective Equipment	Adequate clothing to minimize direct contact with skin.	
Ventilation	Local Exhaust	Use exhaust fans if necessary to control mist or vapor.	
	Mechanical (general)	Normal room ventilation.	
	Special	NA	

SECTION 9 PHYSICAL PROPERTIES AND CHEMICAL PROPERTIES

9.1 Information on Basic Physical & Chemical Properties

a)	Appearance	Grey liquid	k)	Vapor pressure	No data available
b)	Odor	None	l)	Vapor density	No data available
c)	Odor threshold	NA	m)	Relative density	1.36 - 1.41
d)	pH	2.0 - 3.0	n)	Water solubility	Completely soluble
e)	Melting/freezing point	NA / ~30 °F	o)	Partition coefficient n-octanol/water	No data available
f)	Initial boiling point	~212 °F	p)	Auto ignition temp	None
g)	Flash point	None to boiling	q)	Decomposition temp	No data available
h)	Evaporation rate	No data available	r)	Viscosity	500 – 650 cP Brookfield
i)	Flammability	None	s)	Explosive properties	No data available
j)	Upper/lower flamm limits	No data available	t)	Oxidizing properties	No data available

SECTION 10 STABILITY & REACTIVITY

10.1	Reactivity	No data available
10.2	Chemical Stability	Stable under recommended storage conditions.
10.3	Possibility of hazardous reactions	None known
10.4	Conditions to avoid	Evaporation – Keep container sealed tightly when not in use.
10.5	Incompatible materials	Strong bases and alkalis
10.6	Hazardous decomposition products	Phosphorous, nitrogen oxides

SECTION 11 TOXICOLOGICAL INFORMATION

11.1 Information on toxicological effects (Undiluted Chemicals)

Acute toxicity	LD50 Oral (rat) > 2000 mg/kg LD50 Dermal (rat) > 5000mg/kg Conclusion drawn from data from similar materials.
Inhalation	Not established. Not expected to be harmful. If necessary, use respirator if adequate ventilation is not possible to keep exposure to particulate matter at a minimum in heavy mist areas when spraying.
Dermal	May be irritating with continual contact.
Skin corrosion/irritation	No available data
Serious eye damage/eye irritation	May cause moderate eye irritation if exposed.
Respiratory or skin sensitization	Prolonged exposure may cause skin reddening.
Germ cell mutagenicity	No data available
Carcinogenicity	Titanium Dioxide – Respirable form
IARC	Group 2B: Possibly carcinogenic to humans. **(a)** Although IARC has classified titanium dioxide as a possible carcinogenic to humans (2B), their summary concludes: **"No significant exposure to titanium dioxide is thought to occur during the use of products which titanium dioxide is bound to other materials, such as paints."** **(b) OSHA does not regulate titanium dioxide as a carcinogen.** However, under 29CFR 1910.1200 the SDS must convey the fact that titanium dioxide is a potential carcinogen to rats. See additional information below. **Note : Normal application procedures for this product pose no hazard as to the release of respirable titanium dioxide dust, but grinding or sanding dried films of this product may yield respirable titanium dioxide.** Use appropriate protection.
Reproductive toxicity (Ingredients)	No data available
Specific organ toxicity (single exposure)	No data available
Specific organ toxicity (repeated exposure)	No data available
Aspiration hazard	No data available
Additional Information	In lifetime inhalation studies rats were exposed for 2 years to Titanium Dioxide Pigment – **Dry Grades** at 10, 50 and 250 mg/m^3 of **respirable** TiO_2. Slight lung fibrosis was observed at 50 and 250 mg/m^3 levels. Microscopic lung tumors were also observed in 13 percent of the rats exposed to 250 mg/m^3, an exposure level that caused lung overloading and impairment of rat lung's clearance mechanisms. In further studies, these tumors were found to occur only under particle overload conditions in a uniquely sensitive species, the rat, and have little or no relevance for humans. The pulmonary inflammatory response to TiO_2 particles exposure was also found to be much more severe in rats than in other rodent species. In February 2006, IARC re-evaluated Titanium dioxide as pertaining to Group 2B: "possibly carcinogenic to humans", based upon inadequate evidence in humans and sufficient evidence in experimental animals for the carcinogenicity of titanium dioxide. IARC evaluation guidelines consider the generation of tumors, in 2 different studies within the same animal species, to be adequate criteria for an assessment of sufficient evidence. The conclusions of several epidemiology studies on more than 20000 TiO_2 industry workers in Europe and the USA did not suggest a carcinogenic effect of TiO_2 **dust** on the human lung. Mortality from other chronic diseases, including other respiratory diseases was also not associated with exposure to TiO_2 dust. **Based upon all available study results, DuPont scientists conclude that titanium dioxide will not cause lung cancer or chronic respiratory diseases in humans at concentrations experienced in the workplace.**

SECTION 12 ECOLOGICAL INFORMATION

12.1	**Toxicity**	No data available
12.2	**Persistence & degradability**	No data available
12.3	**Bioaccumulation potential**	No data available
12.4	**Mobility in soil**	No data available
12.5	**Results of PBT & vPvP assessment**	Not required. Not conducted.
12.6	**Other adverse effects**	No data available

SECTION 13 DISPOSAL CONSIDERATIONS

13.1 Waste treatment methods

Product	Incinerate or mix with T50 curing agent and allow mixture to solidify, then bury in a suitable land fill where permitted by local regulations. Or contact a licensed disposal facility.
Contaminated packaging	Dispose of a unused product.

SECTION 14 TRANSPORT INFORMATION

DOT (US)	Not dangerous goods
IMDG	Not dangerous goods
IATA	Not dangerous goods

SECTION 15 REGULATORY INFORMATION

SARA 302 Components	No chemicals in this product are subject to the reporting requirements of SARA Title III, section 302.		
SARA 313 Components	This product does not contain any chemical components with known CAS numbers that exceed the threshold (DeMinimis) reporting levels established by SARA Title III, section 313.		
SARA 311/312	This product does not contain any SARA 311/312 hazards.		
New Jersey, Pennsylvania, Massachusetts Right to Know Components	Titanium Dioxide	CAS # 13463-67-7	REV. date 1994-04-01
Clean Water Act	Section 311 lists phosphorous as a hazardous substance, which if discharged into or upon water, will present an imminent and substantial danger to public welfare. Spills of >= 5000 pounds (approx. 50,000 pounds of FSTB) must be reported to the National Response Center @ 1-800-424-8802.		
California Prop. 65 Components	**WARNING!** This product contains a chemical known to the state of California to cause cancer in respirable form. Titanium Dioxide.		
WHMIS	D2A – Carcinogen as respirable dust. Titanium Dioxide.		
IARC	Group 2B – Possible human carcinogen – as respirable dust. Titanium Dioxide.		
RTECS #	XR 2275000 – Titanium Dioxide		

Titanium dioxide included in the Candidate List of Substances of Very High Concern (SVHC) according to Regulation(EC) No. 1907/2006(REACH) – Respirable form.

SECTION 16 OTHER INFORMATION

Full text of H-statements referred to under sections 2 and 3

H316 : 3	Cause mild skin irritation.
H320 : 2B	Causes eye irritation.

Hazard pictograms not required per Tables 3.2.5, 3.2.5.1, 3.3.5, 3.3.5.1 of the GHS of Classification and Labeling of Chemicals Fifth Revised Edition.

Hazards by conclusion drawn from relevant literature and documentation from similar products.

HMIS Rating	Health hazard	1
	Chronic health hazard	*
	Flammability	0
	Physical hazard	0
NFPA	Health hazard	1
	Fire hazard	0
	Reactivity hazard	0

This information is furnished without warranty, representation, inducement or license of any kind, except that it is accurate to the best of Flame Seal Products, Inc. knowledge, or obtained from sources believed by Flame Seal Products, Inc. to be accurate, and Flame Seal Products, Inc. does not assume any legal responsibility for use or reliance upon same. Customers are encouraged to conduct their own tests. Before using any product, read its label.

Flame Seal Products, Inc. 15200 West Drive, Houston, TX 77053 USA
www.flameseal.com | 713-668-4291 (office) | 713-668-1724 (fax) | **Emergency No. (Chemtrec): 800-424-9300**

SDS v1.0 | Date : 05/29/2015