FENNER DUNLOP
ENGINEERED CONVEYOR SOLUTIONS

SAFETY DATA SHEET

Premium Range Tie Gum (Group 1,2,7,8,10 & 12)

Section 1. Identification

GHS product identifier : Premium Range Tie Gum (Group 1,2,7,8,10 & 12)

Product code : Not available.

Other means of identification : Not available.

Product type : Solid.

Relevant identified uses of the substance or mixture and uses advised against

Identified uses : Rubber molding.

Supplier/Manufacturer :
Fenner Dunlop
146 South Westwood
Toledo, OH 43607
Tel: (419) 534 5300 ext. 324
Fax: (419) 531-6284
Email: Dan.hoca@fennerdunlop.com

Emergency telephone number (with hours of operation) : CHEMTREC, U.S. : 1-800-424-9300 International: +1-703-527-3877 (24/7)

Section 2. Hazards identification

OSHA/HCS status : This material is considered hazardous by the OSHA Hazard Communication Standard (29 CFR 1910.1200).

Classification of the substance or mixture :
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1B
TOXIC TO REPRODUCTION (Fertility) - Category 2
AQUATIC HAZARD (ACUTE) - Category 2
AQUATIC HAZARD (LONG-TERM) - Category 2

GHS label elements

Hazard pictograms :

Signal word : Danger

Hazard statements :
H319 - Causes serious eye irritation.
H317 - May cause an allergic skin reaction.
H350 - May cause cancer.
H361 - Suspected of damaging fertility.
H411 - Toxic to aquatic life with long lasting effects.

Precautionary statements

Section 2. Hazards identification

Prevention : P201 - Obtain special instructions before use.
P202 - Do not handle until all safety precautions have been read and understood.
P280 - Wear protective gloves. Wear eye or face protection. Wear protective clothing.
P273 - Avoid release to the environment.
P261 - Avoid breathing dust.
P264 - Wash hands thoroughly after handling.
P272 (OSHA) - Contaminated work clothing must not be allowed out of the workplace.

Response : P391 - Collect spillage.
P308 + P313 - IF exposed or concerned: Get medical attention.
P302 + P352 + P363 - IF ON SKIN: Wash with plenty of soap and water. Wash contaminated clothing before reuse.
P333 + P313 - If skin irritation or rash occurs: Get medical attention.
P305 + P351 + P338 - IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P337 + P313 - If eye irritation persists: Get medical attention.

Storage : P405 - Store locked up.

Disposal : P501 - Dispose of contents and container in accordance with all local, regional, national and international regulations.

Hazards not otherwise classified : None known.

Section 3. Composition/information on ingredients

Substance/mixture : Mixture

Other means of identification : Not available.

Ingredient name	%	CAS number
Carbon black, respirable powder	10 - 30	1333-86-4
Extracts (Petroleum), Heavy Paraffinic Distillate Solvent	5 - 10	64742-04-7
Zinc oxide	1 - 5	1314-13-2
Resorcinol Formaldehyde Resin	1 - 5	65876-95-1
Sulfur, homopolymer	1 - 5	9035-99-8
Hexakis(methoxymethyl)melamine	1 - 5	3089-11-0
N-1,3-Dimethylbutyl-N'-Phenyl-P-Phenylenediamine	0.1 - 1	793-24-8
Distillates (petroleum), hydrotreated heavy naphthenic	0.1 - 1	64742-52-5
2-(Morpholinothio)Benzothiazole	0.1 - 1	102-77-2
di(Benzothiazol-2-yl) Disulphide	0.1 - 1	120-78-5
Neodecanoic acid, cobalt salt	0.1 - 1	27253-31-2
Resorcinol	0.1 - 1	108-46-3
Cobalt(2+) propionate	0.1 - 1	1560-69-6

United States: The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with paragraph (i) of §1910.1200.
Canada: The exact percentage (concentration) in the composition has been withheld as a trade secret in accordance with the amended HPR as of April 2018.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified as hazardous to health or the environment and hence require reporting in this section.

Occupational exposure limits, if available, are listed in Section 8.

Section 4. First aid measures

Description of necessary first aid measures

Eye contact : Immediately flush eyes with plenty of water, occasionally lifting the upper and lower eyelids. Check for and remove any contact lenses. Continue to rinse for at least 20 minutes. Get medical attention.

Inhalation : Remove victim to fresh air and keep at rest in a position comfortable for breathing. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Get medical attention. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Skin contact : Wash with plenty of soap and water. Wash contaminated clothing thoroughly with water before removing it, or wear gloves. Continue to rinse for at least 20 minutes. Get medical attention. In the event of any complaints or symptoms, avoid further exposure. Wash clothing before reuse. Clean shoes thoroughly before reuse.

Ingestion : Wash out mouth with water. Remove dentures if any. Remove victim to fresh air and keep at rest in a position comfortable for breathing. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Stop if the exposed person feels sick as vomiting may be dangerous. Do not induce vomiting unless directed to do so by medical personnel. If vomiting occurs, the head should be kept low so that vomit does not enter the lungs. Get medical attention. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Maintain an open airway. Loosen tight clothing such as a collar, tie, belt or waistband.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Section 4. First aid measures

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician : In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training. If it is suspected that fumes are still present, the rescuer should wear an appropriate mask or self-contained breathing apparatus. It may be dangerous to the person providing aid to give mouth-to-mouth resuscitation. Wash contaminated clothing thoroughly with water before removing it, or wear gloves.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use an extinguishing agent suitable for the surrounding fire.

Unsuitable extinguishing media : None known.

Specific hazards arising from the chemical : This material is toxic to aquatic life with long lasting effects. Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
nitrogen oxides
sulfur oxides
metal oxide/oxides

Special protective actions for fire-fighters : Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire. No action shall be taken involving any personal risk or without suitable training.

Special protective equipment for fire-fighters : Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode.

Section 6. Accidental release measures

Personal precautions, protective equipment and emergency procedures

For non-emergency personnel : No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilled material. Provide adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Put on appropriate personal protective equipment.

For emergency responders : If specialized clothing is required to deal with the spillage, take note of any information in Section 8 on suitable and unsuitable materials. See also the information in "For non-emergency personnel".

Environmental precautions : Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air). Water polluting material. May be harmful to the environment if released in large quantities. Collect spillage.

Section 6. Accidental release measures

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Place spilled material in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Move containers from spill area. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Avoid dust generation. Do not dry sweep. Vacuum dust with equipment fitted with a HEPA filter and place in a closed, labeled waste container. Dispose of via a licensed waste disposal contractor. Note: see Section 1 for emergency contact information and Section 13 for waste disposal.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Persons with a history of skin sensitization problems should not be employed in any process in which this product is used. Avoid exposure - obtain special instructions before use. Avoid exposure during pregnancy. Do not handle until all safety precautions have been read and understood. Do not get in eyes or on skin or clothing. Do not ingest. Avoid release to the environment. If during normal use the material presents a respiratory hazard, use only with adequate ventilation or wear appropriate respirator. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Empty containers retain product residue and can be hazardous. Do not reuse container.

Advice on general occupational hygiene : Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Workers should wash hands and face before eating, drinking and smoking. See also Section 8 for additional information on hygiene measures. Remove contaminated clothing and protective equipment before entering eating areas.

Conditions for safe storage, including any incompatibilities : Store in accordance with local regulations. Store in original container protected from direct sunlight in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10) and food and drink. Store locked up. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabeled containers. Use appropriate containment to avoid environmental contamination. See Section 10 for incompatible materials before handling or use.

Section 8. Exposure controls/personal protection

Control parameters

United States

Occupational exposure limits

Ingredient name	Exposure limits
Carbon black, respirable powder	**NIOSH REL (United States, 10/2016).** TWA: 3.5 mg/m³ 10 hours. TWA: 0.1 mg of PAHs/cm³ 10 hours. **OSHA PEL (United States, 6/2016).** TWA: 3.5 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2017).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction
Extracts (Petroleum), Heavy Paraffinic Distillate Solvent	**NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist
Zinc oxide	**NIOSH REL (United States, 10/2016).** CEIL: 15 mg/m³ Form: Dust TWA: 5 mg/m³ 10 hours. Form: Dust and fumes

Section 8. Exposure controls/personal protection

	STEL: 10 mg/m³ 15 minutes. Form: Fertilizer and/or industrial use. **OSHA PEL (United States, 6/2016).** TWA: 5 mg/m³ 8 hours. Form: Fertilizer and/or industrial use. TWA: 5 mg/m³ 8 hours. Form: Respirable fraction TWA: 15 mg/m³ 8 hours. Form: Total dust **ACGIH TLV (United States, 3/2017).** TWA: 2 mg/m³ 8 hours. Form: Respirable fraction STEL: 10 mg/m³ 15 minutes. Form: Respirable fraction
Resorcinol Formaldehyde Resin	None.
Sulfur, homopolymer	None.
Hexakis(methoxymethyl)melamine	None.
N-1,3-Dimethylbutyl-N'-Phenyl-P-Phenylenediamine	None.
Distillates (petroleum), hydrotreated heavy naphthenic	**OSHA PEL (United States, 6/2016).** TWA: 5 mg/m³ 8 hours. **ACGIH TLV (United States, 3/2017).** TWA: 5 mg/m³ 8 hours. Form: Inhalable fraction **NIOSH REL (United States, 10/2016).** TWA: 5 mg/m³ 10 hours. Form: Mist STEL: 10 mg/m³ 15 minutes. Form: Mist
2-(Morpholinothio)Benzothiazole	None.
di(Benzothiazol-2-yl) Disulphide	None.
Neodecanoic acid, cobalt salt	**ACGIH TLV (United States, 3/2017).** TWA: 0.02 mg/m³, (as Co) 8 hours.
Resorcinol	**ACGIH TLV (United States, 3/2017).** TWA: 10 ppm 8 hours. TWA: 45 mg/m³ 8 hours. STEL: 20 ppm 15 minutes. STEL: 90 mg/m³ 15 minutes. **NIOSH REL (United States, 10/2016).** TWA: 10 ppm 10 hours. TWA: 45 mg/m³ 10 hours. STEL: 20 ppm 15 minutes. STEL: 90 mg/m³ 15 minutes.
Cobalt(2+) propionate	**ACGIH TLV (United States, 3/2017).** TWA: 0.02 mg/m³, (as Co) 8 hours.

Canada

Occupational exposure limits

Ingredient name	Exposure limits
Carbon black, respirable powder	**CA British Columbia Provincial (Canada, 7/2016).** TWA: 3 mg/m³ 8 hours. Form: Inhalable **CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 3.5 mg/m³ 8 hours. **CA Quebec Provincial (Canada, 1/2014).** TWAEV: 3.5 mg/m³ 8 hours. **CA Ontario Provincial (Canada, 7/2015).** TWA: 3 mg/m³ 8 hours. Form: Inhalable fraction **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 7 mg/m³ 15 minutes. TWA: 3.5 mg/m³ 8 hours.
Extracts (Petroleum), Heavy Paraffinic Distillate Solvent	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 5 mg/m³ 8 hours. Form: Mist 15 min OEL: 10 mg/m³ 15 minutes. Form: Mist **CA Quebec Provincial (Canada, 1/2014).** TWAEV: 5 mg/m³ 8 hours. Form: Mist STEV: 10 mg/m³ 15 minutes. Form: Mist
Zinc oxide	**CA Quebec Provincial (Canada, 1/2014).** TWAEV: 5 mg/m³ 8 hours. Form: Fertilizer and/or industrial use. STEV: 10 mg/m³ 15 minutes. Form: Fertilizer and/or industrial use. **CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 2 mg/m³ 8 hours. Form: Respirable 15 min OEL: 10 mg/m³ 15 minutes. Form: Respirable **CA British Columbia Provincial (Canada, 7/2016).** TWA: 2 mg/m³ 8 hours. Form: Respirable STEL: 10 mg/m³ 15 minutes. Form: Respirable **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 10 mg/m³ 15 minutes. Form: Respirable dust and fume. TWA: 2 mg/m³ 8 hours. Form: Respirable dust and fume.

Section 8. Exposure controls/personal protection

	CA Ontario Provincial (Canada, 7/2015). TWA: 2 mg/m³ 8 hours. Form: Respirable fraction STEL: 10 mg/m³ 15 minutes. Form: Respirable fraction
Distillates (petroleum), hydrotreated heavy naphthenic	**CA Alberta Provincial (Canada, 4/2009).** 8 hrs OEL: 5 mg/m³ 8 hours. Form: Mist 15 min OEL: 10 mg/m³ 15 minutes. Form: Mist **CA Quebec Provincial (Canada, 1/2014).** TWAEV: 5 mg/m³ 8 hours. Form: Mist STEV: 10 mg/m³ 15 minutes. Form: Mist
Neodecanoic acid, cobalt salt	**CA Ontario Provincial (Canada, 7/2015).** TWA: 0.02 mg/m³, (as Co) 8 hours. Form: Inorganic **CA British Columbia Provincial (Canada, 7/2016).** TWA: 0.02 mg/m³, (as Co) 8 hours. **CA Quebec Provincial (Canada, 1/2014). Skin sensitizer.** TWAEV: 0.02 mg/m³, (as Co) 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 0.06 mg/m³, (measured as Co) 15 minutes. TWA: 0.02 mg/m³, (measured as Co) 8 hours.
Resorcinol	**CA Alberta Provincial (Canada, 4/2009).** 15 min OEL: 90 mg/m³ 15 minutes. 8 hrs OEL: 10 ppm 8 hours. 8 hrs OEL: 45 mg/m³ 8 hours. 15 min OEL: 20 ppm 15 minutes. **CA British Columbia Provincial (Canada, 7/2016).** TWA: 10 ppm 8 hours. STEL: 20 ppm 15 minutes. **CA Ontario Provincial (Canada, 7/2015).** TWA: 10 ppm 8 hours. STEL: 20 ppm 15 minutes. **CA Quebec Provincial (Canada, 1/2014).** TWAEV: 10 ppm 8 hours. TWAEV: 45 mg/m³ 8 hours. STEV: 20 ppm 15 minutes. STEV: 90 mg/m³ 15 minutes. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 20 ppm 15 minutes. TWA: 10 ppm 8 hours.
Cobalt(2+) propionate	**CA Ontario Provincial (Canada, 7/2015).** TWA: 0.02 mg/m³, (as Co) 8 hours. Form: Inorganic **CA British Columbia Provincial (Canada, 7/2016).** TWA: 0.02 mg/m³, (as Co) 8 hours. **CA Quebec Provincial (Canada, 1/2014). Skin sensitizer.** TWAEV: 0.02 mg/m³, (as Co) 8 hours. **CA Saskatchewan Provincial (Canada, 7/2013).** STEL: 0.06 mg/m³, (measured as Co) 15 minutes. TWA: 0.02 mg/m³, (measured as Co) 8 hours.

Appropriate engineering controls : If user operations generate dust, fumes, gas, vapor or mist, use process enclosures, local exhaust ventilation or other engineering controls to keep worker exposure to airborne contaminants below any recommended or statutory limits.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation.

Individual protection measures

Hygiene measures : Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Appropriate techniques should be used to remove potentially contaminated clothing. Contaminated work clothing should not be allowed out of the workplace. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Section 8. Exposure controls/personal protection

Eye/face protection : Safety eyewear complying with an approved standard should be used when a risk assessment indicates this is necessary to avoid exposure to liquid splashes, mists, gases or dusts. If contact is possible, the following protection should be worn, unless the assessment indicates a higher degree of protection: chemical splash goggles.

Skin protection

Hand protection : Chemical-resistant, impervious gloves complying with an approved standard should be worn at all times when handling chemical products if a risk assessment indicates this is necessary. Considering the parameters specified by the glove manufacturer, check during use that the gloves are still retaining their protective properties. It should be noted that the time to breakthrough for any glove material may be different for different glove manufacturers. In the case of mixtures, consisting of several substances, the protection time of the gloves cannot be accurately estimated.

Body protection : Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Other skin protection : Appropriate footwear and any additional skin protection measures should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Respiratory protection : Based on the hazard and potential for exposure, select a respirator that meets the appropriate standard or certification. Respirators must be used according to a respiratory protection program to ensure proper fitting, training, and other important aspects of use.

Section 9. Physical and chemical properties

Appearance

Physical state : Solid.

Color : Not available.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point : Not available.

Boiling point : Not available.

Flash point : Not available.

Evaporation rate : Not available.

Flammability (solid, gas) : Not available.

Lower and upper explosive (flammable) limits : Not available.

Vapor pressure : Not available.

Vapor density : Not available.

Relative density : Not available.

Solubility : Not available.

Partition coefficient: n-octanol/water : Not available.

Auto-ignition temperature : Not available.

Decomposition temperature : Not available.

Viscosity : Not available.

Flow time (ISO 2431) : Not available.

VOC content : Not available.

Section 10. Stability and reactivity

Reactivity : No specific test data related to reactivity available for this product or its ingredients.

Chemical stability : The product is stable.

Possibility of hazardous reactions : Under normal conditions of storage and use, hazardous reactions will not occur.

Conditions to avoid : No specific data.

Incompatible materials : Reactive or incompatible with the following materials: oxidizing materials.

Hazardous decomposition products : Under normal conditions of storage and use, hazardous decomposition products should not be produced.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result	Species	Dose	Exposure
Carbon black, respirable powder	LD50 Oral	Rat	>15400 mg/kg	-
Hexakis(methoxymethyl)melamine	LD50 Dermal	Rabbit	>7940 mg/kg	-
N-1,3-Dimethylbutyl-N'-Phenyl-P-Phenylenediamine	LD50 Dermal	Rabbit	2806 mg/kg	-
	LD50 Oral	Rat	271 mg/kg	-
Distillates (petroleum), hydrotreated heavy naphthenic	LD50 Oral	Rat	>5000 mg/kg	-
2-(Morpholinothio)Benzothiazole	LD50 Oral	Rat	12560 mg/kg	-
di(Benzothiazol-2-yl) Disulphide	LD50 Dermal	Rabbit	>7940 mg/kg	-
	LD50 Oral	Rat	>12 g/kg	-
Resorcinol	LD50 Dermal	Rabbit	3360 mg/kg	-
	LD50 Oral	Rat	202 mg/kg	-

Irritation/Corrosion

Product/ingredient name	Result	Species	Score	Exposure	Observation
Hexakis(methoxymethyl)melamine	Eyes - Mild irritant	Rabbit	-	0.1 ml	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	0.5 ml	-
2-(Morpholinothio)Benzothiazole	Eyes - Mild irritant	Rabbit	-	50 mg	-
	Eyes - Moderate irritant	Rabbit	-	24 hours 100 mg	-
	Eyes - Moderate irritant	Rabbit	-	100 mg	-
	Skin - Mild irritant	Rabbit	-	24 hours 500 mg	-
	Skin - Mild irritant	Rabbit	-	0.5 g	-
Resorcinol	Eyes - Severe irritant	Rabbit	-	100 mg	-
	Skin - Moderate irritant	Rabbit	-	24 hours 20 mg	-
	Skin - Severe irritant	Rabbit	-	500 mg	-

Sensitization

There is no data available.

Mutagenicity

There is no data available.

Carcinogenicity

Classification

Section 11. Toxicological information

Product/ingredient name	OSHA	IARC	NTP
Carbon black, respirable powder	-	2B	-
Neodecanoic acid, cobalt salt	-	-	Reasonably anticipated to be a human carcinogen.
Resorcinol	-	3	-
Cobalt(2+) propionate	-	-	Reasonably anticipated to be a human carcinogen.

Reproductive toxicity

There is no data available.

Teratogenicity

There is no data available.

Specific target organ toxicity (single exposure)

There is no data available.

Specific target organ toxicity (repeated exposure)

There is no data available.

Aspiration hazard

There is no data available.

Information on the likely routes of exposure : Dermal contact. Eye contact. Inhalation. Ingestion.

Potential acute health effects

Eye contact : Causes serious eye irritation.

Inhalation : No known significant effects or critical hazards.

Skin contact : May cause an allergic skin reaction.

Ingestion : No known significant effects or critical hazards.

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
pain or irritation
watering
redness

Inhalation : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Skin contact : Adverse symptoms may include the following:
irritation
redness
reduced fetal weight
increase in fetal deaths
skeletal malformations

Ingestion : Adverse symptoms may include the following:
reduced fetal weight
increase in fetal deaths
skeletal malformations

Delayed and immediate effects and also chronic effects from short and long term exposure

Short term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Section 11. Toxicological information

Long term exposure

Potential immediate effects : No known significant effects or critical hazards.

Potential delayed effects : No known significant effects or critical hazards.

Potential chronic health effects

General : Once sensitized, a severe allergic reaction may occur when subsequently exposed to very low levels.

Carcinogenicity : May cause cancer. Risk of cancer depends on duration and level of exposure.

Mutagenicity : No known significant effects or critical hazards.

Teratogenicity : No known significant effects or critical hazards.

Developmental effects : No known significant effects or critical hazards.

Fertility effects : Suspected of damaging fertility.

Numerical measures of toxicity

Acute toxicity estimates

Route	ATE value
Oral	8006.2 mg/kg
Dermal	195872.1 mg/kg

Section 12. Ecological information

Toxicity

Product/ingredient name	Result	Species	Exposure
Carbon black, respirable powder	Acute EC50 37.563 mg/L Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
Zinc oxide	Acute IC50 1.85 mg/L Marine water	Algae - Skeletonema costatum	96 hours
	Acute IC50 46 µg/L Fresh water	Algae - Pseudokirchneriella subcapitata - Exponential growth phase	72 hours
	Acute LC50 98 µg/L Fresh water	Daphnia - Daphnia magna - Neonate	48 hours
	Acute LC50 1.1 ppm Fresh water	Fish - Oncorhynchus mykiss	96 hours
Resorcinol	Acute LC50 78000 µg/L Marine water	Crustaceans - Palaemonetes pugio	48 hours
	Acute LC50 >100000 µg/L Fresh water	Daphnia - Daphnia pulicaria	48 hours
	Acute LC50 40 mg/L Fresh water	Fish - Pimephales promelas - Juvenile (Fledgling, Hatchling, Weanling)	96 hours

Persistence and degradability

There is no data available.

Bioaccumulative potential

Product/ingredient name	$LogP_{ow}$	BCF	Potential
Zinc oxide	-	60960	high
Hexakis(methoxymethyl)melamine	-	3.47	low
N-1,3-Dimethylbutyl-N'-Phenyl-P-Phenylenediamine	2.46	17	low
2-(Morpholinothio)Benzothiazole	3.4	-	low
di(Benzothiazol-2-yl) Disulphide	4.5	1.4 to 51	low
Neodecanoic acid, cobalt salt	-	15600	high
Resorcinol	0.8	3.16	low
Cobalt(2+) propionate	-	15600	high

Mobility in soil

Section 12. Ecological information

Soil/water partition coefficient (K_{OC}) : Not available.

Other adverse effects : No known significant effects or critical hazards.

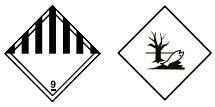
Section 13. Disposal considerations

Disposal methods : The generation of waste should be avoided or minimized wherever possible. Disposal of this product, solutions and any by-products should comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Waste should not be disposed of untreated to the sewer unless fully compliant with the requirements of all authorities with jurisdiction. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling empty containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilled material and runoff and contact with soil, waterways, drains and sewers.

United States - RCRA Toxic hazardous waste "U" List

Ingredient	CAS #	Status	Reference number
Resorcinol	108-46-3	Listed	U201

Section 14. Transport information

	DOT Classification	TDG Classification	IMDG	IATA
UN number	UN3077	UN3077	UN3077	UN3077
UN proper shipping name	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Resorcinol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Resorcinol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Resorcinol). Marine pollutant (Zinc oxide, Resorcinol)	ENVIRONMENTALLY HAZARDOUS SUBSTANCE, SOLID, N.O.S. (Zinc oxide, Resorcinol)
Transport hazard class(es)	9 	9 	9 	9 
Packing group	III	III	III	III
Environmental hazards	Yes.	Yes.	Yes.	Yes.

AERG : 171

Additional information

DOT Classification : Non-bulk packages of this product are not regulated as hazardous materials unless transported by inland waterway. This product is not regulated as a hazardous material when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of §§ 173.24 and 173.24a.

TDG Classification : Product classified as per the following sections of the Transportation of Dangerous Goods Regulations: 2.43-2.45 (Class 9), 2.7 (Marine pollutant mark).
Non-bulk packages of this product are not regulated as dangerous goods when transported by road or rail.

Section 14. Transport information

IMDG : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 4.1.1.1, 4.1.1.2 and 4.1.1.4 to 4.1.1.8.

IATA : This product is not regulated as a dangerous good when transported in sizes of ≤5 L or ≤5 kg, provided the packagings meet the general provisions of 5.0.2.4.1, 5.0.2.6.1.1 and 5.0.2.8.

Special precautions for user : **Transport within user's premises:** always transport in closed containers that are upright and secure. Ensure that persons transporting the product know what to do in the event of an accident or spillage.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) PAIR**: Hexakis(methoxymethyl)melamine
TSCA 8(a) CDR Exempt/Partial exemption: Not determined
United States inventory (TSCA 8b): All components are listed or exempted.
Clean Water Act (CWA) 307: Zinc oxide
Clean Water Act (CWA) 311: Resorcinol; P-cresol

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Listed

Clean Air Act Section 602 Class I Substances : Not listed

Clean Air Act Section 602 Class II Substances : Not listed

DEA List I Chemicals (Precursor Chemicals) : Not listed

DEA List II Chemicals (Essential Chemicals) : Not listed

SARA 302/304

Composition/information on ingredients

No products were found.

SARA 304 RQ : Not applicable.

SARA 311/312

Classification : SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
SKIN SENSITIZATION - Category 1
CARCINOGENICITY - Category 1B
TOXIC TO REPRODUCTION (Fertility) - Category 2

Composition/information on ingredients

Section 15. Regulatory information

Name	Classification
Carbon black, respirable powder	CARCINOGENICITY - Category 2
Extracts (Petroleum), Heavy Paraffinic Distillate Solvent	CARCINOGENICITY - Category 1B
Resorcinol Formaldehyde Resin	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
Sulfur, homopolymer	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
Hexakis(methoxymethyl)melamine	SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
N-1,3-Dimethylbutyl-N'-Phenyl-P-Phenylenediamine	ACUTE TOXICITY (oral) - Category 4 SKIN SENSITIZATION - Category 1
Distillates (petroleum), hydrotreated heavy naphthenic	CARCINOGENICITY - Category 1B
2-(Morpholinothio)Benzothiazole	SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A SKIN SENSITIZATION - Category 1
di(Benzothiazol-2-yl) Disulphide	SKIN SENSITIZATION - Category 1
Neodecanoic acid, cobalt salt	ACUTE TOXICITY (oral) - Category 4 SKIN SENSITIZATION - Category 1 TOXIC TO REPRODUCTION (Fertility) - Category 2
Resorcinol	ACUTE TOXICITY (oral) - Category 4 SKIN CORROSION/IRRITATION - Category 2 SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A
Cobalt(2+) propionate	SKIN SENSITIZATION - Category 1 CARCINOGENICITY - Category 1B

SARA 313

	Product name	CAS number
Form R - Reporting requirements	Zinc oxide Neodecanoic acid, cobalt salt Cobalt(2+) propionate	1314-13-2 27253-31-2 1560-69-6
Supplier notification	Zinc oxide Neodecanoic acid, cobalt salt Cobalt(2+) propionate	1314-13-2 27253-31-2 1560-69-6

SARA 313 notifications must not be detached from the SDS and any copying and redistribution of the SDS shall include copying and redistribution of the notice attached to copies of the SDS subsequently redistributed.

State regulations

Massachusetts : The following components are listed: Carbon black, respirable powder; Extracts (Petroleum), Heavy Paraffinic Distillate Solvent; Zinc oxide; Distillates (petroleum), hydrotreated heavy naphthenic; Silicic acid, calcium salt; Resorcinol

New York : The following components are listed: Resorcinol

New Jersey : The following components are listed: Carbon black, respirable powder; Extracts (Petroleum), Heavy Paraffinic Distillate Solvent; Zinc oxide; Distillates (petroleum), hydrotreated heavy naphthenic; Neodecanoic acid, cobalt salt; Silicic acid, calcium salt; Resorcinol; Cobalt(2+) propionate

Pennsylvania : The following components are listed: Carbon black, respirable powder; Zinc oxide; Neodecanoic acid, cobalt salt; Silicic acid, calcium salt; Resorcinol; Cobalt(2+) propionate

California Prop. 65

⚠ **WARNING**: This product can expose you to Carbon black, respirable powder, which is known to the State of California to cause cancer. For more information go to www.P65Warnings.ca.gov.

Canada

Canadian lists

Canadian NPRI : The following components are listed: Zinc oxide; Neodecanoic acid, cobalt salt; Cobalt (2+) propionate

CEPA Toxic substances : None of the components are listed.

Canada inventory (DSL NDSL) : All components are listed or exempted.

Section 16. Other information

Procedure used to derive the classification

Classification	Justification
SERIOUS EYE DAMAGE/ EYE IRRITATION - Category 2A	Calculation method
SKIN SENSITIZATION - Category 1	Calculation method
CARCINOGENICITY - Category 1B	Calculation method
TOXIC TO REPRODUCTION (Fertility) - Category 2	Calculation method
AQUATIC HAZARD (ACUTE) - Category 2	Calculation method
AQUATIC HAZARD (LONG-TERM) - Category 2	Calculation method

History

Date of issue mm/dd/yyyy : 11/30/2018

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Prepared by : KMK Regulatory Services Inc.

Notice to reader

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Final determination of suitability of any material is the sole responsibility of the user. All materials may present unknown hazards and should be used with caution. Although certain hazards are described herein, we cannot guarantee that these are the only hazards that exist.