

1. PRODUCT AND COMPANY IDENTIFICATION

Company

SK Global Chemical Americas (SKGCA)
501 Office Center Drive, Suite 188
Fort Washington, Pennsylvania 19034

Functional Polyolefins

Customer Service Telephone Number: (267) 896-3500
(Monday thru Friday, 8:00am to 5:00pm EST)

Emergency Information

Transportation: CHEMTREC: 1-800-424-9300
(24 hrs. 7 days a week)

Medical: Rocky Mountain Poison Center: 866-767-5089
(24 hrs. 7 days a week)

Product Information

Product Name: OREVAC 18790
Synonyms: Not Available
Molecular formula: Proprietary
Chemical family: Proprietary
Product use: Coextrusion tie-layer

2. HAZARDS IDENTIFICATION

Emergency Overview

Color: Translucent
Physical State: Solid
Form: Granules
Odor: None

Classification of the substance or mixture: Not a hazardous substance or mixture.

GHS-Labeling

Supplemental Hazard Statements:

Processing may release vapors and/or fumes, which cause eye, skin and respiratory tract irritation.

Supplemental Information

Potential Health Effects:

Acute exposure: Contact with the product, when handled at high temperatures, can cause serious burns. Inhalation: Possible irritation of respiratory system (by dust inhalation). Inhalation of vapors due to thermal decomposition: Risk of irritation of respiratory system. Toxic effects cannot be excluded. Skin contact: At high temperature, products of thermal decomposition can be irritating to skin. Repeated contact may cause allergic reactions in very susceptible persons. Eye contact: At high temperature, products of thermal decomposition can be irritating to eyes

Other:

Handle in accordance with good industrial hygiene and safety practice (pellets/granules). This product may release fume and/or vapor of variable composition depending on processing time and temperature.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No.	Wt/Wt%	GHS Classification
Maleic Anhydride Grafted Polyolefin	Proprietary Polymer*	< = 100%	Not Classified

* The specific chemical identity is withheld because it is trade secret information of SKGCA.

4. FIRST AID MEASURES**4.1. Description of necessary first-aid measures:****General advice:**

No hazards which require special first aid measures

Inhalation:

Inhalation of vapors due to thermal decomposition: move victim to fresh air. Oxygen or artificial respiration if needed. In case of persistent problems: Consult a physician.

Skin:

In case of contact with hot product: Cool skin rapidly with cold water after contact with molten polymer. Remove product with vegetable oil or paraffin. In case of adhesion, do not try to remove product. Treat the affected areas as thermal burns. Consult a physician.

Eyes:

Dusts: Wash well-open eyes immediately, abundantly and thoroughly with water. Remove particles remaining under the eyelids. If irritation persists, consult an ophthalmologist.

On contact with hot product: Cool eyes rapidly with cold water after contact with molten polymer. Consult an ophthalmologist immediately.

Ingestion:

If swallowed, DO NOT induce vomiting. Get medical attention. Never give anything by mouth to an unconscious person.

Protection of first-aiders:

Dusts: In case of insufficient ventilation, wear suitable respiratory equipment.

4.2. Most important symptoms/effects, acute and delayed:

No data available.

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

No specific treatment noted; treat symptomatically.

5. FIREFIGHTING MEASURES

Extinguishing media (suitable):

Water spray, Carbon dioxide (CO₂), Foam, Dry powder.

Protective equipment:

Fire fighters and others who may be exposed to products of combustion should wear full firefighting turn out gear (full Bunker Gear) and self-contained breathing apparatus (pressure demand / NIOSH approved or equivalent).

Further firefighting advice:

Ensure a system for the rapid emptying of containers. In case of fire nearby, remove the bags. Firefighting equipment should be thoroughly decontaminated after use.

Fire and explosion hazards:

Thermal decomposition giving flammable and toxic products: Carbon dioxide (CO₂), Carbon monoxide.

Possible formation of: Steam

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures:

Avoid contact with the skin and the eyes. Avoid breathing dust. Wear a dust mask and safety glasses/goggles if necessary. In case of insufficient ventilation, wear suitable respiratory equipment.

Environmental precautions:

Do not release into the environment. Do not let product enter drains.

Methods and materials for containment/clean-up:

For Recovery: Recover the product. Shovel into suitable container for disposal. Sweep up to prevent slipping hazard.

For Elimination: Destroy the product by incineration in accordance with state, federal and local regulations.

7. HANDLING AND STORAGE

Handling

Technical measures/precautions:

Storage and handling precautions applicable to products: Solid (pellets). Ensure ventilation of work areas and extraction of dust or vapors likely to be given off during conversion operations (product handled when hot). Provide showers, eye baths. Provide water supplies near the point of use.

Safe handling advice:

Avoid the formation and deposition of dust. In case of dust formation, wear a dust mask. Avoid accumulation of static charges during transfers in metallic systems. Keep well away from naked flames.

Hygiene measures:

Avoid contact with the skin and the eyes. Avoid breathing dust. Product handled when hot : Avoid exposure to vapor. When using do not eat, drink or smoke. Wash hands after handling. Remove contaminated clothing and protective equipment before entering eating areas.

Storage**General Information on storage conditions:**

Store in waterproof containers. Store in an area protected from the weatherproof. Keep in a dry, cool place. Keep away from direct sunlight. Protect against light. Provide earthing and safe electrical equipment.

Storage Incompatibility – General:

Strong acids. Strong oxidizing agents.

Packaging Material:

Recommended: Packaging impermeable to water vapor (to maintain the technical properties of the product), Coated polypropylene big bags, Waterproof polyethylene bags

8. EXPOSURE CONTROLS/PERSONAL PROTECTION**Airborne Exposure Guidelines:****Particles Not Otherwise Specified / Nuisance Dust (Proprietary)**

US. ACGIH Threshold Limit Values

Form:	Inhalable particles.
Time weighted average	10 mg/m ³
Form:	Respirable particles.
Time weighted average	3 mg/m ³

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

Form:	Respirable fraction.
PEL:	5mg/m ³
Form:	Total dust
PEL:	15 mg/m ³

US OSHA Table Z-3 (29 CFR 1910.1000)

Form:	Respirable fraction.
Time weighted average	15 millions of particles per cubic foot of air
Form:	Total dust
Time weighted average	50 millions of particles per cubic foot of air
Form:	Respirable fraction.
Time weighted average	5 mg/m ³
Form:	Total dust.
Time weighted average	15 mg/m ³

Only those components with exposure limits are printed in this section. Limits with skin contact designation above have skin contact effect. Air sampling alone is insufficient to accurately quantitate exposure. Measures to prevent significant cutaneous absorption may be required. Limits with a sensitizer designation above mean that exposure to this material may cause allergic reactions.

Engineering controls:

Investigate engineering techniques to reduce exposures below airborne exposure limits (if applicable see above) or to otherwise reduce exposures. Ensure ventilation of work areas and extraction of dust or vapors likely to be given off during conversion operations (product handled when hot). If practical, use local mechanical exhaust ventilation at sources of air contamination such as open process equipment.

Respiratory protection:

Avoid breathing dust. Avoid breathing processing fumes or vapors. Where airborne exposure is likely or airborne exposure limits are exceeded (if applicable, see above), use NIOSH approved respiratory protection equipment appropriate to the material and/or its components and substances released during processing. Consult respirator manufacturer to determine appropriate type equipment for a given application. Observe respirator use limitations specified by NIOSH or the manufacturer. For emergency and other conditions where there may be a potential for significant exposure or where exposure limit may be significantly exceeded, use an approved full face positive-pressure, self-contained breathing apparatus or positive-pressure airline with auxiliary self-contained air supply. Respiratory protection programs must comply with 29 CFR § 1910.134.

Skin protection:

Protective clothing, including gloves (product handled in molten state). Processing of this product releases vapors or fumes which may cause skin irritation. Minimize skin contamination by following good industrial hygiene practice. Wearing protective gloves is recommended. Wash hands and contaminated skin thoroughly after contact with processing fumes or vapors. Wash thoroughly after handling.

Eye protection:

Use good industrial practice to avoid eye contact. Safety glasses/goggles (product handled in molten state) - Wear face-shield and protective clothing in case of problems during processing. Processing of this product releases vapors or fumes which may cause eye irritation. Where eye contact may be likely, wear chemical goggles and have eye flushing equipment available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Color:	Translucent
Physical state:	Solid
Form:	Granules
Odor:	None.
Odor threshold:	No data available.
Flash point:	Not relevant.
Auto-ignition temperature:	No data available.
pH:	Not relevant.
Relative Density:	No data available.
Vapor Pressure:	Not relevant.
Vapor Density:	Not applicable.
Boiling Point/Boiling Range:	Not relevant.
Melting Point/Range:	284 – 329F (140 – 165C)
Evaporation Rate:	Not relevant.
Solubility in water:	No data available.
Viscosity, kinematic:	No data available.
Oil/Water Partition Coefficient:	No data available.
Decomposition Temperature:	No data available
Flammability:	No data available.

10. STABILITY AND REACTIVITY

Reactivity:	No data available.
Stability:	This product is stable under normal handling and storage conditions.
Hazardous reactions:	None under normal conditions of use.
Incompatible materials to avoid:	Strong acids, Strong oxidizing agents.
Conditions/hazards to avoid:	Keep away from heat and sources of ignition. Store protected from moisture.
Hazardous decomposition products:	Thermal decomposition giving toxic, flammable, and/or corrosive products: Carbon dioxide (CO ₂), Carbon monoxide.

11. TOXICOLOGICAL INFORMATION**Information on Toxicological Effects**

All available data on this product and/or its components and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

Acute toxicity:

Inhalation: Inhalation of vapors due to thermal decomposition: Risk of irritation of respiratory system, Toxic effects cannot be excluded.

Ingestion: Polymer: According to its composition, this product should not be harmful under normal conditions of use.

Dermal: Polymer: According to its composition, this product should not be harmful under normal conditions of use.

Skin corrosion/irritation: Polymer: According to its composition, can be considered as Slightly or not irritating to skin. Contact with the product, when handled at high temperatures, can cause serious burns. At high temperature, products of thermal decomposition can be irritating to skin

Serious eye damage/irritation: Polymer: According to its composition, can be considered as Slightly or not irritating to eyes. Contact with the product, when handled at high temperatures, can cause serious burns. At high temperature, products of thermal decomposition can be irritating to eyes

Respiratory sensitization: No data available.

Skin sensitization: Not a skin sensitizer.

Germ cell mutagenicity: Polymer: According to its composition, this product should not be harmful under normal conditions of use. Contains no ingredient listed as a mutagen.

Carcinogenicity: Polymer: According to its composition, this product should not be harmful under normal conditions of use.

Reproductive toxicity: Polymer: According to its composition, this product should not be harmful under normal conditions of use.

STOT – single exposure: At high temperature, products of thermal decomposition can be irritating to respiratory system.

STOT – repeated exposure: Polymer: According to its composition, this product should not be harmful under normal conditions of use.

Aspiration Hazard: Not relevant.

12. ECOLOGICAL INFORMATION

Ecotoxicology Assessment

All available and relevant data on this product and/or the components quoted in section 3 and/or the analogue substances/metabolites have been taken into account for the hazard assessment.

Acute toxicity:	Not possible to conclude based on available information.
Persistence and degradability:	Inert polymer. Not biodegradable on the basis of its structure.
Bioaccumulative potential:	Not possible to conclude based on available information.
Mobility in soil:	Not relevant.
Results of PBT and vPvB Assessment:	Not possible to conclude based on available information
Other adverse effects:	None known.

13. DISPOSAL CONSIDERATIONS**Waste disposal:**

Do not dispose of waste, product or packaging into the sewer or the environment. Where possible recycling is preferred to disposal or incineration. If recycling is not an option, incinerate or dispose of in accordance with federal, state, and local regulations. Consult a regulatory specialist to determine appropriate state or local reporting requirements, for assistance in waste characterization and/or hazardous waste disposal and other requirements listed in pertinent environmental permits. Note: Chemical additions to, processing of, or otherwise altering this material may make this waste management information incomplete, inaccurate, or otherwise inappropriate. Furthermore, state and local waste disposal requirements may be more restrictive or otherwise different from federal laws and regulations.

14. TRANSPORT INFORMATION**US Department of Transportation (DOT):**

Not Regulated.

International Maritime Dangerous Goods Code (IMDG):

Not Regulated.

15. REGULATORY INFORMATION**International Inventories**

Country or Region	Inventory Name	Status
Australia	Australian Inventory of Chemical Substances (AICS)	Conforms to
Canada	Domestic Substance List (DSL)	All components listed.
China	Inventory of Existing Chemical Substances in China (IECSC)	Conforms to

Europe	European Inventory of Existing Commercial Chemical Substances (EINECS)	Conforms to
Japan	Inventory of Existing and New Chemical Substances (ENCS)	Conforms to
Korea	Existing Chemical List (ECL)	Conforms to
Philippines	Philippine Inventory of Chemicals and Chemical Substances (PICCS)	Conforms to
United States	Toxic Substance Control Act (TSCA) Inventory	All components listed.

United States – Federal Regulations**SARA Title III – Section 302 Extremely Hazardous Chemicals:**

The components in this product are either not SARA Section 302 regulated or regulated but present in negligible concentrations.

SARA Title – Section 311/312 Hazard Categories:

No SARA Hazards.

SARA Title III – Section 313 Toxic Chemicals:

This material does not contain any chemical components with known CAS numbers that exceed the threshold (De Minimum) reporting levels established by SARA Title III, Section 313.

Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) – Reportable Quantity (RQ):

The components in this product are either not CERCLA regulated, regulated but present in negligible concentrations, or regulated with no assigned reportable quantity.

United States – State Regulations**New Jersey Right to Know**

No components are subject to the New Jersey Right to Know Act.

Pennsylvania Right to Know

<u>Chemical Name</u>	<u>CAS-No.</u>
Maleic anhydride grafted polyethylene	Proprietary

California Prop. 65

This product does not contain any chemicals known to the State of California to cause cancer, birth defects, or any other reproductive defects.

16. OTHER INFORMATION

The statements, technical information and recommendations contained herein are believed to be accurate as of the date hereof. Since the conditions and methods of use of the product and of the information referred to herein are beyond our control, SKGCA expressly disclaims any and all liability as to any results obtained or arising from any use of the product reliance on such information; NO WARRANTY OF FIRNESS FOR ANY PARTICULAR PURPOSE, WARRANTY OF MERCHANTABILITY OR ANY OTHER

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