SAFETY DATA SHEET

INEOS Olefins & Polymers USA

Polypropylene (PP) resin

Section 1. Identification

GHS product identifier : Polypropylene (PP) resin

Product code : SDS# 1800

Other means of identification : 10-3950, 13-series, 14-series, 100-series, H-series, KL-series, KS-series, KV-series, L-series, N-series, R-series, T-series, TS01, W-series, Experimental PP formulations designated by an "x" in the grade name, PP homopolymer, PP copolymer, PP terpolymer, widespec PP, offgrade PP, and generic prime PP.

Covers all commercial and experimental polypropylene homo- and co-polymer products.

For product specific information please see our technical and regulatory documents online at www.ineos.com or contact your INEOS account representative.

Product type : Pellets. or Flakes.

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

Product use : Industrial applications.

Area of application : Industrial applications.

Supplier's details : INEOS USA LLC
2600 South Shore Blvd.
#500
League City, Texas 77573
Telephone no.: 281-535-6600

e-mail address of person responsible for this SDS : sdsrequests@ineos.com

Emergency telephone number (with hours of operation) : USA:1 (800) 424-9300
Outside USA:+1 703-527-3887 (CHEMTREC)

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 : COMBUSTIBLE DUSTS

GHS label elements

Signal word : Warning

Hazard statements : May form combustible dust concentrations in air.

Precautionary statements

Prevention : Not applicable.

Response : Not applicable.

Storage : Not applicable.

Disposal : Not applicable.

United States

Section 2. Hazards identification

Supplemental label elements : Keep container tightly closed. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Prevent dust accumulation.

Hazards not otherwise classified : COMBUSTIBLE DUSTS. If small particles are generated during further processing, handling, or by other means, combustible dust concentrations in air may form. Fine dust clouds may form explosive mixtures with air. Handling and/or processing of this material may generate a dust which can cause mechanical irritation of the eyes, skin, nose and throat. In the event that combustible dust is generated, the hazard is posed only by the size of the particle not its chemical content because all monomers, additives and pigment are totally encapsulated within the resin and cannot be released in pure form.

Hazards identified when used : No known significant effects or critical hazards.

Section 3. Composition/information on ingredients

Substance/mixture : Polymer

Other means of identification : 10-3950, 13-series, 14-series, 100-series, H-series, KL-series, KS-series, KV-series, L-series, N-series, R-series, T-series, TS01, W-series, Experimental PP formulations designated by an "x" in the grade name, PP homopolymer, PP copolymer, PP terpolymer, widespec PP, offgrade PP, and generic prime PP.

Covers all commercial and experimental polypropylene homo- and co-polymer products.

For product specific information please see our technical and regulatory documents online at www.ineos.com or contact your INEOS account representative.

Ingredient name	Synonyms	%	Identifiers
1-Propene, homopolymer	-	>95	CAS: 9003-07-0
1-Propene, polymer with ethene	-	>95	CAS: 9010-79-1
1-Butene, polymer with ethene and 1-propene	-	>95	CAS: 25895-47-0
1-Butene, polymer with 1-propene	-	>95	CAS: 29160-13-2

Any concentration shown as a range is to protect confidentiality or is due to batch variation.

There are no additional ingredients present which, within the current knowledge of the supplier and in the concentrations applicable, are classified 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. Get medical attention if irritation occurs.

Inhalation : If affected by fumes from heated material, remove from source of exposure and move the affected person into fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Get medical attention.

Skin contact : If burned by contact with hot material, flush skin immediately with large amounts of cold water. If possible, submerge area in cold water. No attempt should be made to detach polymer adhering to the skin or to remove clothing attached with molten material. Thermal burns require immediate medical attention. Cold material: Wash with soap and water.

Section 4. First aid measures

Ingestion : Wash out mouth with water. If material has been swallowed and the exposed person is conscious, give small quantities of water to drink. Do not induce vomiting unless directed to do so by medical personnel.

Most important symptoms/effects, acute and delayed

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Over-exposure signs/symptoms

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

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

Notes to physician : Treat symptomatically. Contact poison treatment specialist immediately if large quantities have been ingested or inhaled.

Specific treatments : No specific treatment.

Protection of first-aiders : No action shall be taken involving any personal risk or without suitable training.

See toxicological information (Section 11)

Section 5. Fire-fighting measures

Extinguishing media

Suitable extinguishing media : Use dry chemical powder.

Unsuitable extinguishing media : Do not use water jet.

Specific hazards arising from the chemical : May be combustible at high temperature.

Hazardous thermal decomposition products : Decomposition products may include the following materials:
carbon dioxide
carbon monoxide
Burning can produce carbon monoxide and/or carbon dioxide and other harmful products. The major decomposition products are low molecular weight oligmers (C6-18) of polypropylene. Degradation products may include trace amounts of acrolein, formaldehyde, aldehydes, and other organic vapors.

Section 5. Fire-fighting measures

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. Move containers from fire area if this can be done without risk. Use water spray to keep fire-exposed containers cool.

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. Shut off all ignition sources. No flares, smoking or flames in hazard area. Avoid breathing dust. 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).

Methods and materials for containment and cleaning up

Small spill : Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Vacuum or sweep up material and place in a designated, labeled waste container. Dispose of via a licensed waste disposal contractor.

Large spill : Granules spilled on the floor can cause slipping.Move containers from spill area. Use spark-proof tools and explosion-proof equipment. Approach release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Vacuum or sweep up material and place in a designated, labeled waste container. Avoid creating dusty conditions and prevent wind dispersal. Dispose of via a licensed waste disposal contractor.

Section 7. Handling and storage

Precautions for safe handling

Protective measures : Put on appropriate personal protective equipment (see Section 8). Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing dust. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). Prevent dust accumulation. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Take precautionary measures against electrostatic discharges. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material. Empty containers retain product residue and can be hazardous. Do not reuse container.

Section 7. Handling and storage

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. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Light hydrocarbon vapours can build up in the headspace of tanks. These can cause flammability/explosion hazards even at temperatures below the normal flash point (note: flash point must not be regarded as a reliable indicator of the potential flammability of vapour in tank headspaces). Tank headspaces should always be regarded as potentially flammable and care should be taken to avoid static electrical discharge and all ignition sources during filling, and sampling from storage tanks.

There is a risk of being splashed with molten materials. Heated material can cause thermal burns. Do not breathe gas, fumes or vapor. When handling hot material, wear heat resistant protective gloves, clothing and face shield that are able to withstand the temperature of the heated product. Pneumatic conveying of powder and pellets can generate large static electrical charges. Electrical discharge in presence of air can cause an explosion. Earth all equipment.

Electrical equipment and lighting should be protected to appropriate standards to prevent dust coming into contact with hot surfaces, sparks or other ignition sources. Fine dust clouds may form explosive mixtures with air. To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

Conditions for safe storage, including any incompatibilities :

Store in accordance with local regulations. Store in a segregated and approved area. 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. Eliminate all ignition sources. Separate from oxidizing materials. 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.

The main hazards are related to pallet stock slippage and forklift truck maneuvers, which can cause injury to personnel. It is highly recommended that adequate procedures covering storage handling of pallets are established and maintained. These procedures must be kept up to date and regularly audited. In most cases, best practice is to stack pallets no more than 2 high. However, facilities responsible for storing the material should perform a site specific risk assessment to determine whether pallets can be stacked safely.

Section 8. Exposure controls/personal protection

Control parameters

Occupational exposure limits

Ingredient name	Exposure limits
Polypropylene (PP) resin	**ACGIH TLV (United States)** Particulates Not Otherwise Specified TWA 8 hours: 10 mg/m³. Form: Inhalable. Particulates Not Otherwise Specified TWA 8 hours: 3 mg/m³. Form: Respirable fraction. **OSHA PEL (United States)** Particulates Not Otherwise Specified TWA 8 hours: 15 mg/m³. Form: Total. Particulates Not Otherwise Specified TWA 8 hours: 5 mg/m³. Form: Respirable fraction.

Section 8. Exposure controls/personal protection

1-Propene, homopolymer	None.
1-Propene, polymer with ethene	None.
1-Butene, polymer with ethene and 1-propene	None.
1-Butene, polymer with 1-propene	None.

Biological exposure indices

None known.

Appropriate engineering controls : Use only with adequate ventilation. 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. The engineering controls also need to keep gas, vapor or dust concentrations below any lower explosive limits. Use explosion-proof ventilation equipment.

Environmental exposure controls : Emissions from ventilation or work process equipment should be checked to ensure they comply with the requirements of environmental protection legislation. In some cases, fume scrubbers, filters or engineering modifications to the process equipment will be necessary to reduce emissions to acceptable levels.

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. Wash contaminated clothing before reusing. Ensure that eyewash stations and safety showers are close to the workstation location.

Eye/face protection : Safety glasses with side shields. If operating conditions cause high dust concentrations to be produced, use dust 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.
When handling hot material, wear heat-resistant protective gloves that are able to withstand the temperature of molten product. Cold material: None required. However, use of adequate ventilation is good industrial practice.

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.
When handling hot material, wear heat resistant protective gloves, clothing and face shield that are able to withstand the temperature of the heated product.
Cold material: None required. However, use of adequate ventilation is good industrial practice.

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.
When handling hot material, wear heat-resistant protective gloves, clothing and face shield that are able to withstand the temperature of the molten product.
Cold material: None required. However, use of adequate ventilation is good industrial practice.

Section 8. Exposure controls/personal protection

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

The conditions of measurement of all properties are at standard temperature and pressure unless otherwise indicated.

Appearance

Physical state : Solid. [Pellets./Flakes.]

Color : White to yellowish.

Odor : Not available.

Odor threshold : Not available.

pH : Not available.

Melting point/freezing point : 135 to 167°C (275 to 332.6°F)

Boiling point or initial boiling point and boiling range : Not available.

Flash point : Not applicable.

Evaporation rate : Not available.

Flammability : Not applicable.

Lower and upper explosion limit/flammability limit : Not applicable.

Vapor pressure : Not available.

Relative vapor density : Not applicable.

Relative density : 0.85 to 0.965

Density : Not available.

Solubility(ies) :

Media	Result
cold water hot water	Not soluble Not soluble

Partition coefficient: n-octanol/water : The product is insoluble in water and octanol.

Auto-ignition temperature : >340°C (>644°F)

Decomposition temperature : >300°C (>572°F)

SADT : Not available.

Viscosity : Dynamic (room temperature): Not available.
Kinematic (room temperature): Not available.
Kinematic (40°C (104°F)): Not available.

Particle characteristics

Median particle size : Not available.

Other information

Physical/chemical properties comments : No additional information.

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.
Under normal conditions of storage and use, hazardous polymerization will not occur.

Conditions to avoid : If heated to more than 300°C, the product may form vapors or fumes which could cause irritation of the respiratory tract, coughing, and shortness of breath. Avoid the creation of dust when handling and avoid all possible sources of ignition (spark or flame). To avoid fire or explosion, dissipate static electricity during transfer by grounding and bonding containers and equipment before transferring material.

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

Hazardous decomposition products : Burning can produce carbon monoxide and/or carbon dioxide and other harmful products. The major decomposition products are low molecular weight oligmers (C6-18) of polypropylene. Degradation products may include trace amounts of acrolein, formaldehyde, aldehydes, and other organic vapors.

Section 11. Toxicological information

Information on toxicological effects

Acute toxicity

Product/ingredient name	Result
1-Propene, homopolymer	**Rat - Oral - LD50** >8 g/kg

Conclusion/Summary [Product] : Not available.

Skin corrosion/irritation

Conclusion/Summary [Product] : Not available.

Serious eye damage/eye irritation

Conclusion/Summary [Product] : Not available.

Respiratory corrosion/irritation

Conclusion/Summary [Product] : Not available.

Respiratory or skin sensitization

Section 11. Toxicological information

Skin

Conclusion/Summary [Product] : Not available.

Respiratory

Conclusion/Summary [Product] : Not available.

Germ cell mutagenicity

Conclusion/Summary [Product] : No component of this product at levels greater than or equal to 0.1% is classified by established regulatory criteria as a mutagen.

Carcinogenicity

Conclusion/Summary [Product] : None of the components in this product at concentrations greater than 0.1% are listed by IARC, NTP, OSHA or ACGIH as a carcinogen.

Classification

Product/ingredient name	OSHA	IARC	NTP
1-Propene, homopolymer	-	3	-

Reproductive toxicity

Conclusion/Summary [Product] : No known significant effects or critical hazards.

Specific target organ toxicity (single exposure)

Not available.

Specific target organ toxicity (repeated exposure)

Not available.

Aspiration hazard

Not available.

Information on the likely routes of exposure

Routes of entry anticipated: Oral, Dermal, Inhalation, Eyes.

Potential acute health effects

Eye contact : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the eyes.

Inhalation : Exposure to airborne concentrations above statutory or recommended exposure limits may cause irritation of the nose, throat and lungs.

Skin contact : No known significant effects or critical hazards.

Ingestion : No known significant effects or critical hazards.

Section 11. Toxicological information

Symptoms related to the physical, chemical and toxicological characteristics

Eye contact : Adverse symptoms may include the following:
irritation
redness

Inhalation : Adverse symptoms may include the following:
respiratory tract irritation
coughing

Skin contact : No specific data.

Ingestion : No specific data.

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

Short term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Long term exposure

Potential immediate effects : Not available.

Potential delayed effects : Not available.

Potential chronic health effects

Conclusion/Summary [Product] : Not available.

General : Repeated or prolonged inhalation of dust may lead to chronic respiratory irritation.

Carcinogenicity : No known significant effects or critical hazards.

Mutagenicity : No known significant effects or critical hazards.

Reproductive toxicity : No known significant effects or critical hazards.

Numerical measures of toxicity

Acute toxicity estimates

N/A

Section 12. Ecological information

Toxicity

Conclusion/Summary [Product] : Wildlife may ingest plastic pellets or bags. Although not toxic, such materials may physically block the digestive system, causing starvation or death.

Persistence and degradability

Conclusion/Summary [Product] : Not available.

Bioaccumulative potential

Not available.

Section 12. Ecological information

Mobility in soil

Soil/Water partition coefficient : Not available.

Mobility : This product is not likely to move rapidly with surface or groundwater flows because of its low water solubility.

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 at all times 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 emptied 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.

Section 14. Transport information

	DOT Classification	TDG Classification	Mexico Classification	IMDG	IATA
UN number	Not regulated.	Not regulated.	Not regulated.	Not regulated.	Not regulated.
UN proper shipping name	-	-	-	-	-
Transport hazard class(es)	-	-	-	-	-
Packing group	-	-	-	-	-
Environmental hazards	No.	No.	No.	No.	No.

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.

Transport in bulk according to IMO instruments : Not available.

Section 15. Regulatory information

U.S. Federal regulations : **TSCA 8(a) CDR Exempt/Partial exemption**: All components are listed or exempted.
United States inventory (TSCA 8b): All components are active or exempted.

TSCA 12(b) - Chemical export notification

Not applicable.

Clean Air Act Section 112 (b) Hazardous Air Pollutants (HAPs) : Not 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 : COMBUSTIBLE DUSTS

Composition/information on ingredients

Name	%	Classification
1-Propene, homopolymer	> 95	COMBUSTIBLE DUSTS
1-Propene, polymer with ethene	> 95	COMBUSTIBLE DUSTS
1-Butene, polymer with 1-propene	> 95	COMBUSTIBLE DUSTS
1-Butene, polymer with ethene and 1-propene	> 95	COMBUSTIBLE DUSTS

SARA 313

Not applicable.

State regulations

Massachusetts : None of the components are listed.

New York : None of the components are listed.

New Jersey : None of the components are listed.

Pennsylvania : None of the components are listed.

California Prop. 65

This product does not require a Safe Harbor warning under California Prop. 65.

International regulations

Chemical Weapon Convention List Schedules I, II & III Chemicals

Not listed.

Montreal Protocol

Not listed.

Section 15. Regulatory information

Stockholm Convention on Persistent Organic Pollutants

Not listed.

Rotterdam Convention on Prior Informed Consent (PIC)

Not listed.

UNECE Aarhus Protocol on POPs and Heavy Metals

Not listed.

Section 16. Other information

Hazardous Material Information System (U.S.A.)

Health	/	0
Flammability		1
Physical hazards		0

Caution: HMIS® ratings are based on a 0-4 rating scale, with 0 representing minimal hazards or risks, and 4 representing significant hazards or risks. Although HMIS® ratings and the associated label are not required on SDSs or products leaving a facility under 29 CFR 1910.1200, the preparer may choose to provide them. HMIS® ratings are to be used with a fully implemented HMIS® program. HMIS® is a registered trademark and service mark of the American Coatings Association, Inc.

The customer is responsible for determining the PPE code for this material. For more information on HMIS® Personal Protective Equipment (PPE) codes, consult the HMIS® Implementation Manual.

National Fire Protection Association (U.S.A.)

Procedure used to derive the classification

Classification	Justification
COMBUSTIBLE DUSTS	On basis of test data

History

Date of issue/Date of revision : 10/02/2025

Date of previous issue : No previous validation

Version : 1

Key to abbreviations :
ATE = Acute Toxicity Estimate
BCF = Bioconcentration Factor
GHS = Globally Harmonized System of Classification and Labelling of Chemicals
IATA = International Air Transport Association
IBC = Intermediate Bulk Container
IMDG = International Maritime Dangerous Goods
IMO = International Maritime Organization
LogPow = logarithm of the octanol/water partition coefficient
MARPOL = International Convention for the Prevention of Pollution From Ships, 1973 as modified by the Protocol of 1978. ("Marpol" = marine pollution)
N/A = Not available
SGG = Segregation Group
TDG = Transportation of Dangerous Goods
UN = United Nations

United States

Section 16. Other information

References : HCS (U.S.A.) - Hazard Communication Standard
International transport regulations

Indicates information that has changed from previously issued version.

Notice to reader

To the best of our knowledge, the information contained herein is accurate. However, neither the above-named supplier, nor any of its subsidiaries, assumes any liability whatsoever for the accuracy or completeness of the information contained herein.
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.