Material Safety Data Sheet
Polypropylene Homopolymer

Section 1 - Product Identification

Synonyms	:	Polypropylene (PP) Homopolymer
Chemical Formula	:	$C_{22}H_{42}O_3$
Company Identification	:	Tradeasia International Pte. Limited
Address	:	133 Cecil Street # 12-03 Keck Seng Tower, Singapore Tel: +65-6227 6365 Fax: +65-6225 6286 Email: contact@chemtradeasia.com
Recommended use	:	Thin-wall application, household article, closures & multi cavities injection molding etc

Section 2 – Hazards Identification

2.1 Classification
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008.

2.2 Label elements
Not a hazardous substance or mixture according to Regulation (EC) No. 1272/2008
Signal Word N.A.
Hazard Statements
N.A.

2.3 Other hazards
This substance/mixture contains no components considered to be either persistent, bioaccumulative and toxic (PBT), or very persistent and very bioaccumulative (vPvB) at levels of 0.1% or higher.

Section 3 – Composition/Information on Ingredients

3.1 Composition comments
Formula : C22H42O3
Molecular weight : 354.6 g/mo
CAS-No. : 9003-07-0

Chemical Name	EC No/CAS No	Purity, %
Polypropylene	9003-07-0	max. 99.9

Section 4 – First-Aid Measures

4.1. Description of first aid measures
General Advice If symptoms persist, call a physician.
Eye Contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Get

medical attention.
Skin Contact Wash off immediately with plenty of water for at least 15 minutes. If skin irritation persists, call a physician.
Inhalation Remove to fresh air. If not breathing, give artificial respiration. Get medical attention if symptoms occur.
Ingestion Clean mouth with water and drink afterwards plenty of water. Get medical attention if symptoms occur.

4.2. Most important symptoms and effects, both acute and delayed
N.A.

4.3. Indication of any immediate medical attention and special treatment needed
N.A.

Section 5 – Fire Fighting Measures

5.1. Suitable Extinguishing media
Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide.

5.2. Specific hazards arising from the chemical
Carbon oxides

5.3. Special protective actions for fire-fighters
Wear self-contained breathing apparatus for firefighting if necessary.

Section 6 – Accidental Release Measures

6.1. Personal precautions, protective equipment and emergency procedures
Wear respiratory protection. Avoid dust formation. Avoid breathing vapors, mist or gas. Ensure adequate ventilation. Evacuate personnel to safe areas. Avoid breathing dust.

6.2. Environmental precautions
Prevent further leakage or spillage if safe to do so. Do not let product enter drains. Discharge into the environment must be avoided.

6.3. Methods and material for containment and cleaning up
Use a shovel to put the material into a convenient waste disposal container do not allow any potentially contaminated water with pellets to entry any waterway, sewer or drain.

Section 7 – Handling and Storage

7.1. Precautions for safe Handling
Maintain good housekeeping. Keep away from heat, sparks, open flame or any ignition source. Use with adequate ventilation. After handling, always wash hands thoroughly with soap and water. Spilled pellet may create a slipping hazard. Electrostatic charge may build up during handling. Grounding of equipment is recommended.

7.2. Conditions for safe storage, including any incompatibilities

Store in a dry place with adequate ventilation and away from direct sunlight, excessive heat and strong oxidizers. Keep packaging (container) closed to prevent contamination.

Section 8 – Exposure Controls/Personal Protection

8.1. Appropriate engineering controls

Use in a well-ventilated area. If handling results in dust generation, special ventilation may be needed to minimize dust exposure. If heated material generates vapour or fumes, use process enclosures, local exhaust ventilation, or other engineering controls to control exposure.

8.2. Individual protection measures, such as personal protective equipment (PPE)

Eye/face protection

Use equipment for eye protection tested and approved under appropriate government standards such as NIOSH (US) or EN 166(EU).

Skin protection

Handle with gloves. Gloves must be inspected prior to use. Use proper glove removal technique (without touching glove's outer surface) to avoid skin contact with this product. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practices. Wash and dry hands. The selected protective gloves have to satisfy the specifications of Regulation (EU) 2016/425 and the standard EN 374 derived from it.

Body Protection

Choose body protection in relation to its type, to the concentration and amount of dangerous substances, and to the specific work-place., The type of protective equipment must be selected according to the concentration and amount of the dangerous substance at the specific workplace.

Respiratory protection

Respiratory protection is not required. Where protection from nuisance levels of dusts are desired, use type N95 (US) or type P1 (EN 143) dust masks. Use respirators and components tested and approved under appropriate government standards such as NIOSH (US) or CEN (EU).

Control of environmental exposure

Do not let product enter drains.

Section 9 – Physical and Chemical Properties

9.1. Information on basic physical and chemical properties

Appearance and Odor : 3mm ø Solid, Whitish in color and essentially odorless pellet
Organoleptic : Tasteless
Melting Point / freezing Point : 157 – 170OC / Not applicable
Initial Boiling Point : Not applicable
Flash Point : Not applicable, Combustible solid
Evaporation Rate (n-Butyl Acetate = 1) : Not applicable
Specific Gravity (H2O=1) : <1.0
Solubility (in water) : Insoluble
Viscosity : Solid, not applicable
Melt Index230oC/2.16kg : 35.0 gr/10min

Density : 0.903 gr/cm3

Section 10 – Stability and Reactivity

10.1. Reactivity
N.A

10.2. Chemical stability
Stable under normal operating conditions of storage, handling and use.

10.3. Possibility of hazardous reactions
Not likely to occur under normal operating conditions of storage, handling and use.

10.4. Conditions to avoid:
Strong oxidizing agents. Temperature over 300OC, sparks and open flame.

10.5. Incompatible materials
Strong oxidizing agents, Chlorine, permanganates, for example potassium permanganate.

10.6. Hazardous decomposition products
Thermal decomposition products are highly dependent on the combustion conditions. A complex mixture of airborne solid. Liquid particulates and gases will evolve when this material undergoes pyrolysis or combustion. Carbon monoxide and unidentified organic compounds may be formed upon combustion.

Section 11 – Toxicological Information

11.1 Health effects associated with ingredients
Symptoms related to toxicological characteristic
Material is considered essentially inert, non-toxic and practically not harmful as well as not hazardous substances under RoHS regulation. Exposures to high levels of dust or heated fumes may cause irritation.
Carcinogenicity
Material is not carcinogenic as listed by OSHA, NTP or IARC

Section 12 – Ecological Information

12.1.Toxicity
Material is not expected to be harmful to aquatic organisms.

12.2. Bioaccumulative potential
N.A.

12.3. Mobility in soil
The product has low soil mobility. This material floats on water.

12.4. Other adverse effects
N.A.

Section 13 – Disposal Considerations

13.1. Disposal methods
Place in an appropriate disposal facility in compliance with local regulations

Section 14 – Transport Information

14.1 Transportation Classification
Not controlled under DOT (USA), TDG (Canada), ADR (Europe), IMDG and IATA

Section 15 – Regulatory Information

15.1. Safety, health and environmental regulations
This product is not a "Hazardous Chemical" as defined by the OSHA Hazard Communication

Section 16 : Additional Information

16.1. List of abbreviation and acronyms used in this MSDS
SDS : Safety Data Sheets
Index N° : atomic number of the element most characteristic of the properties of the substance
CAS No : Chemical Abstracts Service number
EC No : EINECS Number : European Inventory of Existing Commercial Substances
Repr. Cat. 2 : Substance presumed human reproductive toxicant
Acute Oral Cat. 5 : Substance which is of relatively low acute oral toxicity.
GHS : Globally Harmonised System of Classification and Labelling
LD_{50} : Median Lethal Dose
LC_{50} : Lethal Concentration, 50%
N.A. : Not Applicable
OSHA : Occupational Safety & Health Administration
Cal OSHA : The State of California Division of Occupational Safety and Health (DOSH)
PEL : Permissible Exposure Limits
ACGIH : American Conference of Governmental Industrial Hygienists
TLV : Threshold Limit Value
Japanese MITI : Japanese Ministry of International Trade and Industry
EC_{50} : Half maximal effective concentration
UN : United Nations
U.S. EPA TSCA Inventory: Inventory of the chemical substances manufactured or processed in the United States according to Toxic Substances Control Act compiled and published under the autority of the Environmental Protection Agency
Canadian DSL: Canadian Domestic Substances List

16.2. List of relevant hazard statements and precautionary statements used in this MSDS
Hazard Statement
H361 d: Suspected of damaging the unborn child
H319: Causes serious eye irritation

H303: May be harmful if swallowed
Precautionary Statements
Prevention
P201: Obtain special instructions before use.
P202: Do not handle until all safety precautions have been read and understood.
P281: Use personal protective equipment as required.
P264: Wash eyes thoroughly after handling.
P280: Wear protective gloves/ protective clothing/ eye protection/ face protection.
Response
P308 + P313: If exposed or concerned: get medical advice/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 advice/attention.
Storage
P405: Store locked up.
Disposal
P501: Dispose of contents/container to in accordance with local regulations.

16.3. References

1. Litovitz T L, Norman S A, Veltri J C, Annual Report of the American Association of Poison Control Centers Data Collection System. Am. J. Emerg. Med. (1986), 4, 427-458
2. Denton SM (1996). Acute oral toxicity study in the rat: anhydrous boric acid. Final report. Report no.: 1341/7-1032.
3. National Toxicology Program (NTP) – Technical Report Series No. TR324, NIH Publication No. 88 2580 (1987), PB88 213475/XAB
4. Fail et al., Fund. Appl. Toxicol. (1991) 17, 225-239
5. Heindel et al., Fund. Appl. Toxicol. (1992) 18, 266-277
6. Birge W J, Black J A, EPA-560/-76-008 (April 1977) PB 267 085
7. Scialli AR, Bonde JP, Brüske-Hohlfeld I, Culver D, Li Y, Sullivan FM; ELSEVIER 2009
8. Robbins WA, Xun L, Jia J, Kennedy N, Elashoff DA, Ping L. ;ELSEVIER 2009;(Reproductive Toxicology)
9. Hansveit and Oldersma, 2000; TNO Nutrition and Food Research Institute. Report No. V99.157.
10. Gersich, FM (1984a). Environ.Toxicol.Chem., 3 #1, 89-94 (1984)
11. Soucek et al., 2010. Illinois Natural History Survey, University of Illinois.
For general information on the toxicology of borates see ECETOC Technical Report No. 63 (1995); Patty's Industrial Hygiene and Toxicology, 4th Edition Vol. II, (1994) Chap. 42, 'Boron'.

16.4. Disclaimer of Liability

The information in this MSDS was obtained from sources which we believe are reliable. However, the information is provided without any warranty, express or implied, regarding its accuracy, reliability or completeness. The conditions or methods of handling, storage use or disposal of the product are beyond our control and may be beyond our knowledge. For this and other reasons, we do not assume responsibility and expressly disclaim liability for loss, damage or expense arising out of or in any way connected with the handling, storage, use or disposal of the product. It is the user's responsibility to satisfy himself as to the suitableness and completeness of such information for his own particular use.
This MSDS was prepared and is to be used only for this product. If the product is used as a component in another product, this MSDS information may not be applicable.