

SAFETY DATA SHEET

1. Identification of the substance or mixture and of the supplier

A. GHS product identifier : Thermoplastic Vulcanized, INNOPRENE

1350B	1553B	1640NK	1730N	1870B	2506B	9805B
1350N	1554B	1641B	1731B	1870N	3871N	9601N
1450BK	1554BA	1641BD	1731BD	2400B	5430B	9606N
1450NK	1559B	1642B	1755B	2400BA	5430BM	9612N
1451B	1559BD	1649B	1800B	2400N	5430B-I	
1550N	1600B	1649N	1800N	2400NA	5431B	
1550NE	1640B	1651B	1801B	2403B	5700B	
1550NK	1640BK	1722B	1830B	2406B	9655B	
1550B	1640N	1730B	1830BW	2500B	9801B	

B. Recommended use of the chemical and restrictions on use

Recommended use : Parts of automobile, Cables, Roofing Sheet, medical, General industrial parts etc.

Restrictions on use : Use for recommended use only.

C. Supplier

Company name : KUMHO POLYCHEM CO., LTD.

Address : #116-46, Weoulha-dong, Yeosu-City, Cheonranam-Do, Korea

Emergency phone number : 82-61-688-2823

Respondent : Quality Assurance Team

Fax : 82-61-688-2850

2. Hazards identification

A. GHS classification of the substance/mixture

Not classified according to OSHA 29 CFR 1910.1200

B. GHS label elements, including precautionary statements

Pictogram and symbol : Not applicable

Signal word : Not applicable

Hazard statements : Not applicable

Precautionary statements

Precaution : Not applicable

Treatment : Not applicable

Storage : Not applicable

Disposal : Not applicable

C. Other hazard information not included in hazard classification (NFPA) :

Health : Not available

Flammability : Not available

Reactivity : Not available

3. Composition/information on ingredients

Chemical Name	Common Name(Synonyms)	CAS number	EC number	Content (%)
Carbon black	ACETYLENE BLACK	1333-86-4	215-609-9	Trade Secret
DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC	Hydrotreated (mild) heavy paraffinic distillate	64742-54-7	265-157-1	Trade Secret
Talc (containing no asbestos)	Talc	14807-96-6	238-877-9	Trade Secret

fibers)				
Polypropylene	1-Propene, homopolymer	9003-07-0	618-352-4	Trade Secret
1-Propene polymer with ethene, block	1-Propene polymer with ethene, block	106565-43-9	Not available	Trade Secret
ETHYLENE PROPYLENE-DIENE TERPOLYMER	Not available	25038-36-2	607-505-0	Trade Secret

4. First aid measures

A. Eye contact

- In case of contact with substance, immediately flush eyes with running water at least 20 minutes.

B. Skin contact

- In case of contact with substance, immediately flush skin with running water at least 20 minutes.
- Remove and isolate contaminated clothing and shoes.
- Wash contaminated clothing and shoes before reuse.
- Get immediate medical advice/attention.

C. Inhalation

- Specific medical treatment is urgent.
- Move victim to fresh air.
- Give artificial respiration if victim is not breathing.
- Administer oxygen if breathing is difficult.

D. Ingestion

- Do not let him/her eat anything, if unconscious.
- Get immediate medical advice/attention.

E. Indication of immediate medical attention and notes for physician

- Ensure that medical personnel are aware of the material(s) involved and take precautions to protect themselves.

5. Fire-fighting measures

A. Suitable (and unsuitable) extinguishing media

- Suitable extinguishing media: Dry sand, dry chemical, alcohol-resistant foam, water spray, regular foam, CO₂
- Unsuitable extinguishing media: High pressure water streams

B. Specific hazards arising from the chemical

- May be ignited by heat, sparks or flames.
- Containers may explode when heated.
- Some of these materials may burn, but none ignite readily.
- Fire will produce irritating and/or toxic gases.
- If inhaled, may be harmful.

C. Special protective equipment and precautions for fire-fighters

- Dike fire-control water for later disposal; do not scatter the material.
- Move containers from fire area if you can do it without risk.
- Fire involving Tanks; Cool containers with flooding quantities of water until well after fire is out.
- Fire involving Tanks; Withdraw immediately in case of rising sound from venting safety devices or discoloration of tank.
- Fire involving Tanks; Always stay away from tanks engulfed in fire.

6. Accidental release measures

A. Personal precautions, protective equipment and emergency procedures

- Eliminate all ignition sources.
- Stop leak if you can do it without risk.
- Please note that materials and conditions to avoid.

- Ventilate the area.
- Do not touch or walk through spilled material.
- Prevent dust cloud.

B. Environmental precautions and protective procedures

- Prevent entry into waterways, sewers, basements or confined areas.

C. The methods of purification and removal

- Small Spill; Flush area with flooding quantities of water. And take up with sand or other non-combustible absorbent material and place into containers for later disposal.
- Large Spill; Dike far ahead of liquid spill for later disposal.
- With clean shovel place material into clean, dry container and cover loosely; move containers from spill area.

7. Handling and storage

A. Precautions for safe handling

- Please note that materials and conditions to avoid.
- Wash thoroughly after handling.
- Please work with reference to engineering controls and personal protective equipment.
- Be careful to high temperature.

B. Conditions for safe storage

- Store in a closed container.
- Store in cool and dry place.

8. Exposure controls/personal protection

A. Occupational Exposure limits

ACGIH regulation

Carbon black : TWA = 3 mg/m³ (inhalable particulate matter)

Talc (containing no asbestos fibers) : TWA = 2 mg/m³ (particulate matter containing no asbestos and < 1 % crystalline silica, respirable particulate matter)

Biological exposure index : Not available

OSHA regulation

Carbon black : TWA = 3.5 mg/m³

Talc (containing no asbestos fibers) : TWA = 20 mppcf (Mineral Dusts)

NIOSH regulation

Carbon black : TWA = 3.5 mg/m³

Talc (containing no asbestos fibers) : TWA = 2 mg/m³ (resp)

EU regulation : Not available

Other : Not available

B. Appropriate engineering controls

- Provide local exhaust ventilation system or other engineering controls to keep the airborne concentrations of vapors below their respective threshold limit value.

C. Personal protective equipment

Respiratory protection

- Wear NIOSH or European Standard EN 149 approved full or half face piece (with goggles) respiratory protective equipment when necessary.
- In case exposed to particulate material, the respiratory protective equipments as follow are recommended. ;facepiece filtering respirator or air-purifying respirator, high-efficiency particulate air(HEPA) filter media or respirator equipped with powered fan, filter media of use(dust, mist, fume)
- In lack of oxygen(< 19.5%), wear the supplied-air respirator or self-contained breathing apparatus.oxygen

Eye protection

- Wear facepiece with goggles to protect.
- Wear breathable safety goggles to protect from particulate material causing eye irritation or other disorder.
- An eye wash unit and safety shower station should be available nearby work place.

Hand protection

- Wear appropriate protective gloves by considering physical and chemical properties of chemicals.
- Body protection**
- Wear appropriate protective clothing by considering physical and chemical properties of chemicals.

9. Physical and chemical properties

A. Appearance

Description : Solid(pellet)

Color : Black or Yellowish

B. Odor : Slight odor

C. Odor threshold : Not available

D. pH : Not available

E. Melting point/freezing point : Not available

F. Initial boiling point and boiling range : Not available

G. Flash point : 250 °C

H. Evaporation rate : Not available

I. Flammability (solid, gas) : Not available

J. Upper/lower flammability or explosive limits : Not available

K. Vapor pressure : Not available

L. Solubility (ies) : Solubility in water : Insoluble

M. Vapor density : Not available

N. Specific gravity : 0.90 ~ 1.00

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

P. Auto ignition temperature : Not available

Q. Decomposition temperature : 300 °C

R. Viscosity : Not available

S. Molecular weight : 100,000 ~ 600,000

10. Stability and reactivity

A. Chemical stability and Possibility of hazardous reactions :

- Fire may produce irritating and/or toxic gases.
- If inhaled, may be harmful.

B. Conditions to avoid :

- Heat, sparks or flames

C. Incompatible materials :

- Combustibles

D. Hazardous decomposition products :

- Irritating and/or toxic gases

11. Toxicological information

A. Information of Health Hazardous

Acute toxicity

Oral : Not classified

- **Carbon black** : Rat - LD₅₀ > 10,000 mg/kg (OECD Guideline 401)
- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : Rat - LD₅₀ > 5,000 mg/kg bw (OECD Guideline 401, GLP)
- **Talc (containing no asbestos fibers)** : Rat - LD₅₀ > 5,000 mg/kg bw (OECD Guideline 423, GLP)

Dermal : Not classified

- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : Rabbit - LD₅₀ > 2,000 mg/kg bw (OECD Guideline 402, GLP)
- **Talc (containing no asbestos fibers)** : Rat - LD₅₀ > 2,000 mg/kg bw (OECD Guideline 402, GLP)

Inhalation : Not classified

- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : Rat - LC₅₀ > 2.18 mg/L air / 4hr (OECD Guideline 403, GLP)
- **Talc (containing no asbestos fibers)** : Rat - LC₅₀ > 2.1 mg/L air / 4hr (OECD Guideline 403, GLP)

Skin corrosion/ irritation : Not classified

- **Carbon black** : In the skin irritation test using rabbits, skin irritations were not observed. (OECD Guideline 404)
- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : In the skin irritation test using rabbits, the test material was slightly irritating. (OECD Guideline 404, GLP)
- **Talc (containing no asbestos fibers)** : In the skin irritation test using human skin model, skin irritations were not observed. (EU method B46 (irritation))

Serious eye damage/ irritation : Not classified

- **Carbon black** : In the eyes irritation test using rabbits, the test material was not irritating. (OECD Guideline 405)
- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : In the eyes irritation test using rabbits, the test material was not irritating (OECD Guideline 405, GLP)
- **Talc (containing no asbestos fibers)** : In the eyes irritation test using rabbits, the test material was not irritating. (OECD Guideline 405, GLP)

Respiratory sensitization : Not classified

- **Talc (containing no asbestos fibers)** : In the respiratory sensitization test using rats, this material was not sensitizing.

Skin sensitization : Not classified

- **Carbon black** : In the skin sensitization test using guinea pig, this material was not skin sensitizing. (OECD Guideline 406, GLP)
- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : In the skin sensitization test using guinea pig, this material was not skin sensitizing. (OECD Guideline 406, GLP)
- **Talc** : In the skin sensitization test using guinea pig, this material was not skin sensitizing. (OECD Guideline 406)

Carcinogenicity : Not classified

- **Carbon black** :
 - IARC** : Group 2B
 - ACGIH** : A3 - Confirmed Animal Carcinogen with Unknown Relevance to Humans
- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** :
 - EU CLP** : This material is not carcinogenicity (OECD Guideline 451)
- **Talc (containing no asbestos fibers)** :
 - IARC** : Group 3
 - ACGIH** : A4 - Not Classifiable as a Human Carcinogen (containing no asbestos fibers)
- **Polypropylene** :
 - IARC** : Group 3

Mutagenicity : Not classified

- **Carbon black** : Negative reactions were observed in vivo mammalian cell study: DNA damage and/or repair using rat, Negative reactions were observed in vitro Bacterial Reverse Mutation Assay. (OECD Guideline 471, GLP)
- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : Negative reaction was observed in vivo Mammalian Erythrocyte Micronucleus Test. (OECD Guideline 474), Positive reactions were observed in vitro Bacterial Reverse Mutation Assay. (OECD Guideline 471, GLP)
- **Talc (containing no asbestos fibers)** : Negative reaction was observed in vivo Genetic Toxicology: Rodent Dominant Lethal Test (OECD Guideline 478, GLP), Results of in vitro Mammalian Chromosome Aberration Test, negative reaction is present (OECD Guideline 473)

Reproductive toxicity : Not classified

- **Carbon black** : In the reproductive toxicity test using rats, there was no effect, including maternal changes in fetal development. (OECD Guideline 414, GLP)
- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : In the

reproductive toxicity test using rats, no reproductive toxicity was found (NOAEL \geq 1,000 mg/kg bw / day, OECD Guideline 421, GLP)

- **Talc (containing no asbestos fibers)** : In the reproductive toxicity test using rabbits, there was no effect on physicalization, maternal or fetal survival rates. (OECD Guideline 416, GLP)

Specific target organ toxicity (single exposure) : Not classified

- **Carbon black** : No effect on endotelin or blood pressure after carbon black exposure. It also does not affect the body temperature and activities of animals

- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : In the acute oral toxicity studies using rats, no found death and systemic toxicity (OECD Guideline 401, GLP)

- **Talc (containing no asbestos fibers)** : The result of exposure to high doses of talc in rabbits. talc was detected in the lungs, septum, pericardium and liver

Specific target organ toxicity (repeat exposure) : Not classified

- **Carbon black** : Repeated inhalation toxicity tests for 13 weeks (91 days) using rats did not show any toxic reactions at low concentrations, but there was clear evidence of inflammation, hyperplasia of some alveolar epithelial cells and fibrosis, and a slight reduction in lung clearance, 8 After months, a slight recovery was found.

- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : In the repeated oral toxicity study during 90-day using rats, atrophy occurred in the male genitalia (testis, semen and prostate) (NOAEL = 125 mg / kg / day, OECD Guideline 408)

- **Talc (containing no asbestos fibers)** : Prolonged or repeated exposure may result in pulmonary fibrosis (talc pneumoconiosis) due to asbestos content.

Aspiration Hazard : Not available

12. Ecological information

A. Ecological toxicity

- **Acute toxicity** : Not classified

Fish

- **Talc (containing no asbestos fibers)** : 96hr - LC₅₀ (Fishes species) = 98,581.016 mg/L ((Q)SAR)

Crustacean

- **Carbon black** : 24hr - EC₅₀ (*Daphnia magna*) = 5,600 mg/L (OECD Guideline 202, GLP)

- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : 48hr - LC₅₀ (Daphnid species) = 36,812.359 mg/L ((Q)SAR)

Algae

- **Carbon black** : 72hr - EC₅₀ (*Desmodesmus subspicatus*) > 10,000 mg/L (OECD Guideline 201, GLP)

- **Talc (containing no asbestos fibers)** : 96hr - EC₅₀ (*Green Algae*) = 7,202.7 mg/L ((Q)SAR)

- **Chronic toxicity** : Not classified

Fish

- **Carbon black** : 96hr - NOEC (*Danio rerio*) = 240 mg/L (OECD Guideline 236)

- **Talc (containing no asbestos fibers)** : 30day - NOEC (Fish species) = 5,979.718 mg/L ((Q)SAR)

Crustacean :

- **Carbon black** : 24hr - NOEC (*Daphnia magna*) = 3,200 mg/L (OECD Guideline 202, GLP)

- **Talc (containing no asbestos fibers)** : 30day - NOEC (Daphnid species) = 1,459.798 mg/L ((Q)SAR)

Algae :

- **Carbon black** : 72hr - NOEC (*Desmodesmus subspicatus*) > 10,000 mg/L (OECD Guideline 201, GLP)

- **Talc (containing no asbestos fibers)** : 30day - NOEC (*Green Algae*) = 918.089 mg/L ((Q)SAR)

B. Persistence and degradability

Persistence

- **Talc (containing no asbestos fibers)** : Low persistency (log Kow is less than 4 estimated.) (log Kow = -9.4)

- **Polypropylene** : High persistency (log Kow is more than 4 estimated.) (Log Kow = 17.21) (estimated)

Degradability : Not available

C. Bioaccumulative potential

Bioaccumulation

- **Talc (containing no asbestos fibers)** : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 3.162)

- **Polypropylene** : Bioaccumulation is expected to be low according to the BCF < 500 (BCF = 3.162) (estimated)

Biodegradation

- **Carbon black** : carbon black is an inorganic substance and will not be degraded by microorganisms.

- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : As not well-biodegraded, it is expected to have high accumulation potential in living organisms (31% biodegradation was observed after 28 days) (OECD Guideline 301 F, GLP)

D. Mobility in soil

- **Polypropylene** : High potency of mobility to soil. (Koc = 8.633e+014) (estimated)

E. Other hazardous effect : Not available

F. Hazardous to the ozone layer : Not applicable

13. Disposal considerations

A. Disposal method

Waste must be disposed of in accordance with federal, state and local environmental control regulations.

B. Disposal precaution

Consider the required attentions in accordance with waste treatment management regulation.

14. Transport information

A. UN Number : Not applicable

B. UN Proper shipping name : Not applicable

C. Transport Hazard class : Not applicable

D. Packing group : Not applicable

E. Marine pollutant : Not applicable

F. Special precautions

in case of fire : Not applicable

in case of leakage : Not applicable

15. Regulatory information

① Internal Regulatory information

U.S.A management information (Section 8(b) Inventory (TSCA)):

- **Carbon black** : Present

- **DISTILLATES (PETROLEUM), HYDROTREATED HEAVY PARAFFINIC** : Present

- **Talc (containing no asbestos fibers)** : Present

- **Polypropylene** : Present [XU]

- **ETHYLENE PROPYLENE-DIENE TERPOLYMER** : Present [XU]

U.S.A management information (OSHA Regulation) : Not regulated

U.S.A management information (CERCLA Regulation) : Not regulated

U.S.A management information (EPCRA 302 Regulation) : Not regulated

U.S.A management information (EPCRA 304 Regulation) : Not regulated

U.S.A management information (EPCRA 313 Regulation) : Not regulated

② External information

Substance of Roteradame Protocol : Not regulated

Substance of Stockholm Protocol : Not regulated

Substance of Montreal Protocol : Not regulated

16. Other information

A. Information source and references

- TOMES-LOLI® ; <http://www.rightanswerknowledge.com/loginRA.asp>
- ECHA; <https://echa.europa.eu/home>
- American Conference of Governmental Industrial Hygienists TLVs and BEIs.
- NIOSH Pocket Guide; <http://www.cdc.gov/niosh/npg/npgdcas.html>
- National Toxicology Program; <http://ntp.niehs.nih.gov/results/dbsearch/>
- IARC Monographs on the Evaluation of Carcinogenic Risks to Humans; <http://monographs.iarc.fr>

B. Issuing date : 03. May. 2010

C. Revision number and date

revision number : Rev. (11)

date of the latest revision : 28. May. 2021

D. Others

- This SDS is authored in pursuant to the OSHA 29 CFR 1910.1200.
- The content is based on the latest information and knowledge that we currently possess.
- This SDS was authored to aid buyer, processor or any other third person who handles the chemical of subject in the SDS; additionally, it does not warrant suitability of the chemical for special purposes or the commercial use of statements that approves the use of it in combination with other chemicals as well as technical or legal liabilities.
- The content of the SDS may vary depending on the country or the region and may not coincide with the actual regulations. Therefore, the buyer or the processor of the chemical is responsible for observing responsible government's or the region's regulations.