



1. Identification of the substance/preparation and of the company/undertaking

Product name INDOPOL® L-50, H-7, H-8, H-15, H-25
SDS # 0000001304
Historic SDS#: None
Product Use Fuel additive. Sealants Coatings Lubricants Cling film. Adhesives

Supplier BP Chemicals Trading, Ltd.
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 Sunbury-on-Thames
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2. Composition/information on ingredients

Chemical name	CAS no.	%	EINECS / ELINCS.	Classification
Polybutene (Isobutylene/butene copolymer)	9003-29-6	100	500-004-7	

See Section 16 for the full text of the R Phrases declared above

Occupational Exposure Limit(s), if available, are listed in Section 8

3. Hazards identification

This substance is not classified as dangerous according to Directive 67/548/EEC as amended and adapted.

Effects and symptoms

Eyes May cause slight transient irritation. Heated material can cause thermal burns.
Skin Repeated exposure may cause skin dryness or cracking. Heated material can cause thermal burns.
Inhalation Exposure to aerosols or particulates from heated material may cause adverse lung effects if high concentrations are inhaled.
Ingestion Ingestion may cause gastrointestinal irritation and diarrhoea.

4. First-aid measures

Eye Contact Hot material: Flush eyes with plenty of water for at least 15 minutes. Seek medical assistance for mechanical removal of this material from the eye. The use of flushing fluid, other than water, is not recommended. Cold material: flush eyes with plenty of water.
Skin contact Hot material: Immediately flush with cool water for at least 15 minutes. Get immediate medical attention. Cold material: Clean exposed skin with waterless hand cleaner.
Inhalation If inhaled, remove to fresh air. If not breathing, give artificial respiration. If breathing is difficult, give oxygen. Obtain medical attention immediately.
Ingestion Do NOT induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. Obtain medical attention if symptoms occur.
Notes to physician Medical personnel may leave the material in place to minimise physical damage to the skin. Medical personnel may cover the material with a burn gel to prevent the adhesion of the dressing to the material.

5. Fire-fighting measures

Extinguishing Media

Suitable In case of fire, use water fog, foam, dry chemical or CO2 extinguisher or spray.

Not Suitable Do not use water jet.

Hazardous decomposition products These products are carbon oxides (CO, CO2).

Unusual fire/explosion Hazards Rapid depolymerisation can occur in a fire to produce flammable vapours.

Special fire-fighting procedures Cool closed containers exposed to fire with water.

Protection of fire-fighters Fire fighters should wear self-contained positive pressure breathing apparatus (SCBA) and full turnout gear. Firefighters' protective clothing will provide limited protection.

6. Accidental release measures

Personal Precautions Immediately contact emergency personnel. Keep unnecessary personnel away. Use suitable protective equipment (Section 8). Follow all fire fighting procedures (Section 5).

Environmental precautions and cleanup methods If emergency personnel are unavailable, contain spilled material. For small spills add absorbent (soil may be used in the absence of other suitable materials) scoop up material and place in a sealed, liquid-proof container for disposal. For large spills dike spilled material or otherwise contain material to ensure runoff does not reach a waterway. Place spilled material in an appropriate container for disposal. Keep out of waterways. Treat as an oil spill. Insoluble in water. See Section 13 for Waste Disposal Information.

Personal Protection in Case of a Large Spill Splash goggles. Full suit. Boots. Gloves. Suggested protective clothing might not be sufficient; consult a specialist BEFORE handling this product.

7. Handling and storage

Handling Do not breathe vapour or mist. Adequate ventilation should be provided if there is risk of aerosol formation. Keep away from sources of ignition. Ground all equipment containing material. Do not pressurize, cut, weld, braze, solder, drill, grind or expose containers to heat or sources of ignition. To avoid fire or explosion, dissipate static electricity during transfer by earthing and bonding containers and equipment before transferring material. Wash thoroughly after handling. Avoid prolonged or repeated contact with skin. Avoid contact with eyes. Avoid contact of spilled material and runoff with soil and surface waterways.

Empty containers may contain harmful, flammable/combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards.

Storage A potentially flammable atmosphere may be generated if material is held hot for prolonged periods. For prolonged storage at temperatures of 60° C and above, keep in rust-free tanks and exclude oxygen by use of a nitrogen blanket. Heating systems which generate localised hot spots should never be used. Suitable storage materials are: mild steel / carbon steel. Store and use away from heat, sparks, open flame, or any other ignition source. Keep container tightly closed in a cool, well- ventilated place.

8. Exposure controls/personal protection

Ingredient Name **Occupational Exposure Limits**

Polybutene (Isobutylene/butene copolymer) None assigned.

Control Measures Use only with adequate ventilation. Avoid breathing vapour or mist. Wear appropriate respirator when ventilation is inadequate. Ensure that eyewash stations and safety showers are close to the workstation location.

Hygiene measures Wash hands after handling compounds and before eating, smoking, using lavatory, and at the end of day.

Personal protective equipment

Respiratory system Respiratory protection is not normally required.

If ventilation is inadequate, use respirator that will protect against organic vapour and dust/mist.

Skin and body Wear apron or overall if potential for exposure to splashes. When handling hot material, wear heat resistant protective gloves, clothing and face shield that are able to withstand the temperature of the heated product.

Hands Wear suitable gloves. (Nitrile gloves.)
When handling hot material, wear heat-resistant protective gloves that are able to withstand the temperature of molten product.

The correct choice of protective gloves depends upon the chemicals being handled, the conditions of work and use, and the condition of the gloves (even the best chemically resistant glove will break down after repeated chemical exposures). Most gloves provide only a short time of protection before they must be discarded and replaced. Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. Gloves should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

9. Physical and chemical properties

Flash point	>138 °C (OPEN CUP) Cleveland. 115 to 125 °C (CLOSED CUP) Pensky-Martens.
Pour Point	-40 to -23 °C
Colour	Clear. Colourless.
Odour	Characteristic.
Odour threshold	Not available.
Physical state	Liquid.
Solubility	Insoluble in cold water, hot water.
Specific Gravity	0.85 to 0.869
Viscosity	kinematic: 9 to 55.5 cSt at 100°C

10. Stability and reactivity

Conditions to Avoid	Keep away from sources of ignition. Keep away from heat, sparks and flame. Depolymerises at temperatures above 250C.
Incompatibility with Various Substances	Strong oxidizing agents; acidic clays at > 100C.
Hazardous Polymerization	Will not occur.

11. Toxicological information

Acute toxicity Similar materials were practically non-toxic when tested in acute oral (rat LD50 > 34,600 mg/kg), dermal (rabbit LD50 > 10,250 mg/kg). A range of similar materials has been tested for eye and skin irritation. For eye irritation, none of these materials have produced scores exceeding 8.0 out of a possible total of 110 with complete disappearance of effects in 72 hours (rabbits). Consequently these materials are not expected to be irritating to the eyes. When applied to the skin of rabbits similar materials scored 1.5 out of a possible total of 8.0, indicating that this product may be a slight skin irritant.

Acute toxicity

<u>Ingredient Name</u>	<u>Test</u>	<u>Result</u>	<u>Route</u>	<u>Species</u>
Polyisobutylene.	LD50	>34600 mg/kg	Oral	Rat (similar material)
	LD50	>10250 mg/kg	Dermal	Rat (similar material)

Chronic toxicity

Carcinogenic effects	No component of this product at levels greater than 0.1% is identified as a carcinogen by ACGIH, the International Agency for Research on Cancer (IARC) or the European Commission (EC).
Mutagenic Effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a mutagen.
Reproductive Effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as a reproductive toxin.
Developmental and Teratogenic Effects	No component of this product at levels greater than 0.1% is classified by established regulatory criteria as teratogenic or embryotoxic.

12. Ecological information

Ecotoxicity

<u>Ingredient Name</u>	<u>Species</u>	<u>Period</u>	<u>Result</u>
Polybutene (Isobutylene/butene copolymer)	Trout (LC50)	96 hours	>1000 mg/l, (WSF), Nominal Concentration, similar material
	Minnows (LC50)	96 hours	>1000 mg/l, (WSF), Nominal Concentration, similar material
	Daphnia (EC50)	48 hours	>1000 mg/l, (WSF), Nominal Concentration, similar material

Persistence/degradability

This product is unlikely to biodegrade at a significant rate.
May cause long-term adverse effects in the environment.

Mobility This product is not likely to move rapidly with surface or groundwater flows because of its low water solubility of: <1000 ppm

Bioaccumulative potential	This product is not expected to bioaccumulate through food chains in the environment.
Environmental hazards	Not classified as dangerous.
Other Ecological Information	<p>Aquatic studies of materials with very low water solubility often refer to the amount of chemical added to the test system, not the amount dissolved in water. Most acute aquatic toxicity studies of these have used the water-accommodated fraction (WAF) obtained by mixing the test chemical in water for 20 to 24 hours, then siphoning the water for use in the test. The water-soluble fraction (WSF) is a similar approach.</p> <p>These materials are not expected to adversely affect microbial activity. Following a modified OECD Method 209, bacterial inhibition using activated sludge microbes was tested with several grades of this material. The tests showed no bacterial inhibition at loadings of up to 25 mg/L, measured through oxygen consumption (respiration). In separate tests, the biological oxygen demand (BOD) of the micro-organisms was measured. In these tests, there was no evidence of bacterial toxicity, even at loadings of about 200,000 mg/L. In addition, an epoxidised form of this material was found to be non-mutagenic and non-toxic to the micro-organism used in the Ames mutagenicity assay, Salmonella typhimurium.</p>

13. Disposal considerations

Disposal Consideration / Waste information	Dispose of in accordance with all applicable local and national regulations.
	Empty containers may contain harmful, flammable/combustible or explosive residue or vapours. Do not cut, grind, drill, weld, reuse or dispose of containers unless adequate precautions are taken against these hazards. Labels should not be removed from containers until they have been cleaned.
Hazardous Waste	Consult an environmental professional to determine if local, regional or national regulations would classify spilled or contaminated materials as hazardous waste.

14. Transport information

International transport regulations

Regulatory Information	UN number	Proper shipping name	Class	Packing group	Label	Additional Information
ADR/RID Classification	UN3257	Elevated temperature liquid, n.o.s. (Polybutene (Isobutylene/butene copolymer))	9	III	Not determined.	Hazard identification number 99 CEPIC Tremcard 90G04 UK Emergency Action Code: 2W
ADNR Classification	UN3257	Elevated temperature liquid, n.o.s. (Polybutene (Isobutylene/butene copolymer))	9	III	Not determined.	-
IMDG Classification	UN3257	Elevated temperature liquid, n.o.s. (Polybutene (Isobutylene/butene copolymer))	9	III	Not determined.	-
IATA Classification	UN3257	Forbidden			Not determined.	-

Nonbulk Shipping Information

ADR/RID Nonbulk Shipping Information	When this material is shipped at temperatures < 100C this material is not regulated for transport.
ADNR Nonbulk Shipping Information	When this material is shipped at temperatures < 100C this material is not regulated for transport.
IMDG Nonbulk Shipping Information	When this material is shipped at temperatures < 100C this material is not regulated for transport.
IATA Nonbulk Shipping Information	When this material is shipped at temperatures < 100C this material is not regulated for transport.

15. Regulatory information

Label Requirements

Risk Phrases

This product is not classified according to the EU regulations.

EU Regulations

Classification and labeling have been performed according to EU directives 1999/45/EC and 67/548/EEC as amended and adapted.

Other Regulations

Inventories

AUSTRALIAN INVENTORY (AICS): Please contact BP for information on the inventory status of this material.

Tel.: 1 (866) 4 BP-MSDS (866-427-6737 Toll free - North America) e-mail: bpcares@bp.com

CANADA INVENTORY (DSL): Please contact BP for information on the inventory status of this material.

Tel.: 1 (866) 4 BP-MSDS (866-427-6737 Toll free - North America) e-mail: bpcares@bp.com

CHINA INVENTORY (IECS): Please contact BP for information on the inventory status of this material.

Tel.: 1 (866) 4 BP-MSDS (866-427-6737 Toll free - North America) e-mail: bpcares@bp.com

EC INVENTORY (EINECS): Please contact BP for information on the inventory status of this material.

Tel.: 1 (866) 4 BP-MSDS (866-427-6737 Toll free - North America) e-mail: bpcares@bp.com

JAPAN INVENTORY (ENCS): Please contact BP for information on the inventory status of this material.

Tel.: 1 (866) 4 BP-MSDS (866-427-6737 Toll free - North America) e-mail: bpcares@bp.com

KOREA INVENTORY (ECL): Please contact BP for information on the inventory status of this material.

Tel.: 1 (866) 4 BP-MSDS (866-427-6737 Toll free - North America) e-mail: bpcares@bp.com

PHILIPPINE INVENTORY (PICCS): Please contact BP for information on the inventory status of this material.

Tel.: 1 (866) 4 BP-MSDS (866-427-6737 Toll free - North America) e-mail: bpcares@bp.com

US INVENTORY (TSCA): Please contact BP for information on the inventory status of this material.

Tel.: 1 (866) 4 BP-MSDS (866-427-6737 Toll free - North America) e-mail: bpcares@bp.com

16. Other information

HISTORY

Date of issue

11/21/2002.

Date of previous issue

No Previous Validation.

Prepared by

Product Stewardship

Notice to Reader

NOTICE : This Material Safety Data Sheet is based upon data considered to be accurate at the time of its preparation. Despite our efforts, it may not be up to date or applicable to the circumstances of any particular case. We are not responsible for any damage or injury resulting from abnormal use, from any failure to follow appropriate practices or from hazards inherent in the nature of the product.

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