Impruvol 20

SECTION 1 IDENTIFICATION OF THE SUBSTANCE/MIXTURE AND OF THE COMPANY/UNDERTAKING

Trade name	Impruvol 20	
Synonyms	Butylated Hydroxytoluene in petroleum oil; 2,6-di-tert-butyl-4-methyl phenol in petroleum oil; 2,6-di-tert-butyl-p-cresol in petroleum oil	
Use	Additive, Dielectric oil	
Company	Sasol Chemicals (USA) LLC (an affiliate of Sasol Chemicals North America LLC)	
Address	292 State Route 8, Oil City, PA 16301	
Telephone	CHEMTREC North America Transportation Emergency (24-hr)	(800) 424 9300
	CHEMTREC World Wide	(703) 527-3887
	Other Emergencies (24-hr)	(814) 677 2028
	SDS and Product Information (8:00am-4:30pm CST)	(814) 677 2028
	Health and Safety Information (7:30am-4:00pm CST)	(281) 588 3491
	NCEC - Europe	+44 1235 239 670
	NCEC - Americas	+1 215 207 0061
	NCEC - Middle East/Africa	+44 1235 239 671
	NCEC - East/South East Asia	+65 3158 1074
	NCEC - China	+86 400 120 6011
	NCEC - Australia	+61 2801 44558
E-mail address	SasolElectronicSDS@us.sasol.com	

SECTION 2 HAZARDS IDENTIFICATION

OSHA/GHS Hazards	Eye irritation	Category 2B
	Specific target organ toxicity - single exposure	Category 3 (Resp. irritation)
	Aspiration hazard	Category 1
	Acute aquatic toxicity	Category 2
	Chronic aquatic toxicity	Category 2

LABEL ELEMENTS

Hazard symbols

Signal word Warning

Hazard statements
H320 Causes eye irritation.
H335 May cause respiratory irritation.
H304 May be fatal if swallowed and enters airways.
H401 Toxic to aquatic life.
H411 Toxic to aquatic life with long lasting effects.

Precautionary statements

Prevention
P264 Wash skin thoroughly after handling.
P261 Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.
P271 Use only outdoors or in a well-ventilated area.
P273 Avoid release to the environment.

Response
P301 + P310 IF SWALLOWED: Immediately call a POISON CENTER or doctor/ physician.
P331 Do NOT induce vomiting.
P305 + P351 + P338 IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
P304 + P340 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P312 Call a POISON CENTER/doctor if you feel unwell.
P391 Collect spillage.

Storage
P403 + P233 Store in a well-ventilated place. Keep container tightly closed.
P405 Store locked up.

Disposal
P501 Dispose of contents/ container to an approved waste disposal plant.

SECTION 3 COMPOSITION/INFORMATION ON INGREDIENTS

Components	CAS-No.	Weight percent
Highly Refined Mineral Oil	64742-53-6	79 - 81
Butylated hydroxytoluene (BHT)	128-37-0	19 - 21

See Section 8 for Exposure Guidelines and Section 15 for Regulatory Classifications.

SECTION 4 FIRST AID MEASURES

Eye contact In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Remove contact lenses. If eye irritation persists, consult a specialist.

Skin contact Wash off with soap and plenty of water. If skin irritation persists, call a physician. Wash contaminated clothing before re-use.

Inhalation Remove person to fresh air. If signs/symptoms continue, get medical attention. Inhalation of vapours in high concentration may cause irritation of respiratory system.

Ingestion If swallowed, call a poison control centre or doctor immediately. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person.

SECTION 5 FIREFIGHTING MEASURES

FLAMMABLE PROPERTIES

Fire/explosion May be ignited by open flame.
NFPA Class IIIB combustible liquid.

Suitable extinguishing media Use water spray, alcohol-resistant foam, dry chemical or carbon dioxide. Do NOT use water jet.

Protective equipment and precautions for firefighters Wear self-contained breathing apparatus and protective suit.

Further information Evacuate personnel to safe areas. Stop source of fuel if possible. Do not allow run-off from fire fighting to enter drains or water courses. Keep containers and surroundings cool with water spray.

SECTION 6 ACCIDENTAL RELEASE MEASURES

Methods and materials for containment and cleaning up Evacuate the area and eliminate all sources of ignition. Use personal protective equipment. Contain spillage, and then collect with non-combustible absorbent material, (e.g. sand, earth, diatomaceous earth, vermiculite) and place in container for disposal according to local / national regulations (see section 13). Prevent further leakage or spillage if safe to do so. Do not allow material to contaminate ground water system. Do not flush with water.

Spill precautions Non-disposable equipment should be thoroughly decontaminated with soap and water. Do not contaminate any lakes, streams, ponds, groundwater or soil.

SECTION 7 HANDLING AND STORAGE

Safe handling advice Use only in area provided with appropriate exhaust ventilation. Avoid contact with skin and eyes. Do not breathe vapour. Handle in accordance with good industrial hygiene and safety practice. Keep containers tightly closed in a dry, cool and well-ventilated place.

SECTION 8 EXPOSURE CONTROLS/PERSONAL PROTECTION

ENGINEERING MEASURES

Ensure adequate ventilation, especially in confined areas.

PERSONAL PROTECTIVE EQUIPMENT

Eyes Chemical resistant goggles must be worn. Wear as appropriate: Face-shield.

Skin Solvent-resistant gloves Long sleeved clothing Non-disposable equipment should be thoroughly decontaminated with soap and water.

Inhalation Use NIOSH approved respiratory protection. When workers are facing concentrations above the exposure limit they must use appropriate certified respirators.

EXPOSURE GUIDELINES

Components	Exposure limit(s)
Butylated hydroxytoluene (BHT)	ACGIH TLV (8-hour) 2 mg/m3 (inhalable fraction and/or vapor) NIOSH Recommended Exposure Limit 10 mg/m3

PEL=	Permissible Exposure Limits	TWA=	Time Weighted Average (8 hr.)
TLV=	Threshold Limit Value	STEL=	Short Term Exposure Limit (15 min.)
EL=	Excursion Limit	WEEL=	Workplace Environmental Exposure Level

SECTION 9 PHYSICAL AND CHEMICAL PROPERTIES

Appearance liquid

Colour clear to light yellow

Form liquid

Odour mild hydrocarbon-like

Odour Threshold No data available

Flash point > 200 °C, > 392 °F;

Flammability Upper explosion limit: 7 %(V)

Lower explosion limit: 0.9 %(V)

Boiling point/boiling range > 280 °C, > 536 °F;

Melting point/range No data available

Auto-ignition temperature > 320 °C, > 608 °F;

Decomposition temperature No data available

Flammability (solid, gas)	No data available
Vapour pressure	< 1 mm Hg @ 20 °C, 68 °F;
Vapour density	> 1.0
Density	0.9 g/cm3 @ 25 °C, 77 °F;
Relative density	0.9 @25 °C, 77 °F;
Water solubility	insoluble
Viscosity	No data available
Viscosity, dynamic	< 20 mPa.s @ 40 °C, 104 °F;
pH	No data available
Evaporation rate	No data available
Partition coefficient: n-octanol/water	log Pow: > 6;

SECTION 10 STABILITY AND REACTIVITY

Reactivity	No dangerous reaction known under conditions of normal use.
Chemical stability	Stable under recommended storage conditions.
Conditions to avoid	Keep away from heat and sources of ignition.
Hazardous decomposition products	Combustion products include carbon dioxide, carbon monoxide and possibly other unidentified organic compounds.
Materials to avoid	Strong acids and oxidizing agents. Reducing agents.
Hazardous polymerisation	Hazardous polymerisation does not occur.

SECTION 11 TOXICOLOGICAL INFORMATION

Additional Remarks	Information given is based on data obtained from similar substances or components of this material.
Acute dermal toxicity	LD50 Rat: > 2,000 mg/kg Test substance: BHT

Not classified due to data which are conclusive although insufficient for classification.

Acute inhalation toxicity

RD50: 32 mg/m3
Test substance: BHT
(TLV reference document)

Not classified due to data which are conclusive although insufficient for classification.

Acute oral toxicity

LD50 Rat: > 6,000 mg/kg
Test substance: BHT

Skin corrosion/irritation

Test substance: BHT
Not classified due to data which are conclusive although insufficient for classification.

Serious eye damage/eye irritation

Test substance: BHT
Causes eye irritation.

Respiratory or skin sensitisation

human skin: not sensitizing

Germ cell mutagenicity

Genotoxicity in vitro:
Type: Ames test
Result: negative
Test substance: BHT
(literature value)

Genotoxicity in vivo:
Type: micronucleus assay (chromosome aberration);
Result: negative
Test substance: BHT
Category approach

Assessment Mutagenicity:
Based on available data, the classification criteria are not met.

Reproductive toxicity

Reproductive toxicity:
No data available

Assessment Reproductive toxicity:
No data available

Teratogenicity:
No data available

Assessment teratogenicity:
No data available

STOT - single exposure

The substance or mixture is classified as specific target organ toxicant, single exposure, category 3 with respiratory tract irritation.

STOT - repeated exposure	The substance or mixture is not classified as specific target organ toxicant, repeated exposure.
Aspiration toxicity	Not applicable
Carcinogenicity	**Assessment carcinogenicity:** Contains no ingredient listed as a carcinogen

SECTION 12 ECOLOGICAL INFORMATION

Aquatic toxicity	Toxic to aquatic life. Toxic to aquatic life with long lasting effects.
Toxicity to fish	LC50 (Oryzias latipes (Japanese medaka)) 96 hours: > 1 - 10 mg/l Test substance: 2,6-di-tert-butyl-4-methylphenol (literature value)
Toxicity to aquatic invertebrates	EC50 (Daphnia magna (Water flea)) 48 hours: > 0.1 - 1 mg/l Test substance: 2,6-di-tert-butyl-4-methylphenol (literature value)
Toxicity to algae	ErC50 (Pseudokirchneriella subcapitata (green algae)) 72 hours: > 0.1 mg/l Test substance: 2,6-di-tert-butyl-4-methylphenol (literature value) NOErC (Pseudokirchneriella subcapitata (green algae)) 72 hours: > 0.1 - 1 mg/l Test substance: 2,6-di-tert-butyl-4-methylphenol (literature value)
Chronic toxicity to fish	NOEC (Oryzias latipes (Japanese medaka)) 30 d: > 0.01 - 0.1 mg/l Test substance: 2,6-di-tert-butyl-4-methylphenol (literature value)
Chronic toxicity to aquatic invertebrates	NOEC (Daphnia magna (Water flea)) 21 d: > 0.01 - 0.1 mg/l Test substance: 2,6-di-tert-butyl-4-methylphenol (literature value)
Biodegradation	Not readily biodegradable. CO2 Evolution Test (28 d): < 60 % Test substance: 2,6-di-tert-butyl-4-methylphenol
Bioaccumulative potential	Test substance: 2,6-di-tert-butyl-4-methylphenol 646 L/kg ww (EPISuite BCF)
Mobility in soil	No data available

Other adverse effects No data available

SECTION 13 DISPOSAL CONSIDERATIONS

Waste Code Any unused product or empty containers may be disposed of as non-hazardous in accordance with state and federal requirements. Re-evaluation of the product may be required by the user at the time of disposal, since the product uses, transformations, mixtures, contamination, and spillage may change the classification. If the resulting material is determined to be hazardous, please dispose in accordance with state and federal (40 CFR 262) hazardous waste regulations.

Disposal methods Dispose of only in accordance with local, state, and federal regulations. Do not contaminate any lakes, streams, ponds, groundwater or soil.

Empty containers. Empty containers retain product residue (liquid and/or vapor) and can be dangerous. DO NOT PRESSURIZE, CUT, WELD, BRAZE, SOLDER, DRILL, GRIND, OR EXPOSE SUCH CONTAINERS TO HEAT, FLAME, SPARKS, STATIC ELECTRICITY, OR OTHER SOURCES OF IGNITION; THEY MAY EXPLODE AND CAUSE INJURY OR DEATH. Empty drums should be completely drained, triple-rinsed, properly bunged and promptly returned to a drum reconditioner, or properly disposed.

SECTION 14 TRANSPORT INFORMATION

DOT not regulated

IATA UN 3082, Environmentally hazardous substance, liquid, n.o.s., (Butylated Hydroxytoluene), 9, III
This product is regulated as a dangerous good when shipped by air in all quantities according to IATA.

IMDG UN 3082, Environmentally hazardous substance, liquid, n.o.s., (Butylated Hydroxytoluene), 9, III, Marine pollutant
This product is regulated as a Marine Pollutant when shipped by water in all quantities according to the IMDG Code.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

Remarks No data available

SECTION 15 REGULATORY INFORMATION

U.S. FEDERAL REGULATIONS

TSCA Inventory Listing

Components	CAS-No.
Hydrogenated Light Naphthenic Distillates (Petroleum)	64742-53-6
Phenol, 2,6-bis(1,1-dimethylethyl)-4-methyl-	128-37-0

SARA 302 Status

Components	CAS-No.	Weight percent

No chemicals in this material are subject to the reporting requirements of SARA Title III, Section 302.

SARA 311/312 Classification

Should this product meet EPCRA 311/312 Tier reporting criteria of 40 CFR 370, refer to Section 2 of this SDS for appropriate classification and Section 3 for components that meet the hazardous classification.

SARA 313 Chemical

Components	CAS-No.	Weight percent

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

US. EPA CERCLA Hazardous Substances (40 CFR 302)

Components	Reportable Quantity	Weight percent
none		

INTERNATIONAL REGULATIONS

WHMIS Classification

Eye irritation	Category 2B
Specific target organ toxicity - single exposure	Category 3 (Resp. irritation)
Aspiration hazard	Category 1
Acute aquatic toxicity	Category 2
Chronic aquatic toxicity	Category 2

European Union

Chronic aquatic toxicity, Category 2

Australia. Inventory of Chemical Substances (AICS)	Listed
Japan. Inventory of Existing and New Chemical Substances (ENCS)	Not listed
Japan. ISHL - Inventory of Chemical Substances	Not listed
Canada. Domestic Substances List (DSL) Inventory	Listed
Canada. Non-Domestic Substance Listing (NDSL)	Not listed
Philippines. Inventory of Chemicals / Chemical Substances (PICCS)	Listed
Korea. Existing Chemicals Inventory (KECI)	Listed

China. Inventory of Existing Chemical Substances (IECSC)	Listed
Mexico. National Inventory of Chemical Substances (INSQ)	Not listed
New Zealand. Inventory of Chemical Substances (NZIoC)	Listed
Switzerland. Inventory of Notified New Substances (CHINV)	Listed
Taiwan. National Existing Chemical Inventory (NECI)	Listed

Please note: The names and CAS numbers which are used for this product in the stated inventories may deviate from the information which is listed in Section 3.

STATE REGULATIONS

California Prop. 65

Components	**CAS-No.**
none	

SECTION 16 OTHER INFORMATION

HAZARD RATINGS

	Health	Flammability	Physical Hazard/ Instability
HMIS®	1	1	0
NFPA	1	1	0

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