



SAFETY DATA SHEET

STADIS (R) 450

1. IDENTIFICATION OF THE SUBSTANCE/PREPARATION AND COMPANY/UNDERTAKING

PRODUCT NAME: STADIS (R) 450

PART No.: *PSST450

IN-HOUSE No.: Petroleum Specialties

APPLICATIONS: Antistatic additive for use in distillate fuels.

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2. COMPOSITION/INFORMATION ON INGREDIENTS

NAME	EINECS Nr.:	CLASSIFICATION	CONTENT
CAS No.:			
TOLUENE			30-60 %
108-88-3	203-625-9	Xn ,F R-11, 38, 48/20, 63, 65, 67 Rep3	
SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC			10-30 %
64742-94-5	265-198-5	Xn ,N R-51/53, 65, 66, 67	
DINONYLNAPHTHYLSULPHONIC ACID			10-30 %
25322-17-2	246-841-9	Xn R-22, 36/38	
TRADE SECRET POLYMER CONTAINING SULPHUR		- Not classified.	10-30 %
TRADE SECRET POLYMER CONTAINING NITROGEN		- Not classified.	5-10 %
PROPAN-2-OL			1-5 %
67-63-0	200-661-7	Xi ,F R-11, 36, 67	
NAPHTHALENE			1-5 %
91-20-3	202-049-5	Xn ,N R-22, 40, 50/53 Carc3	

The Full Text for all R-Phrases are Displayed in Section 16

COMPOSITION COMMENTS: Preparation.

3. HAZARDS IDENTIFICATION

Highly flammable. Irritating to eyes and skin. Limited evidence of a carcinogenic effect. Harmful: danger of serious damage to health by prolonged exposure through inhalation. Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Possible risk of harm to the unborn child. Harmful: may cause lung damage if swallowed. Vapours may cause drowsiness and dizziness.

4. FIRST AID MEASURES

GENERAL: CAUTION! First aid personnel must be aware of own risk during rescue!

INHALATION: Move the exposed person to fresh air at once. When breathing is difficult, properly trained personnel may assist affected person by administering 100% oxygen. Keep the affected person warm and at rest. Get prompt medical attention. If breathing stops, provide artificial respiration.

INGESTION: DO NOT induce vomiting. Get medical attention immediately. Immediately rinse mouth and provide fresh air.

SKIN: Wash off promptly and flush contaminated skin with water. Promptly remove clothing if soaked through and flush skin with water. Get medical attention if irritation persists after washing.

EYES: Promptly wash eyes with plenty of water while lifting the eye lids. Continue to rinse for at least 15 minutes and get medical attention.

5. FIRE FIGHTING MEASURES

EXTINGUISHING MEDIA: Foam. Water spray, fog or mist. Small fires: Carbon dioxide (CO₂). Dry chemicals, sand, dolomite etc.

SPECIAL FIRE FIGHTING PROCEDURES: Use water to keep fire exposed containers cool and disperse vapours. Keep run-off water out of sewers and water sources. Dike for water control. Avoid water in straight hose stream; will scatter and spread fire.

UNUSUAL FIRE & EXPLOSION HAZARDS: HIGHLY FLAMMABLE! Solvent vapours may form explosive mixtures with air. Vapours are heavier than air and may spread near ground to sources of ignition. May travel considerable distance to source of ignition and flash back.

6. ACCIDENTAL RELEASE MEASURES

PERSONAL PRECAUTION IN SPILL: Wear suitable protective clothing, gloves and eye/face protection.

PRECAUTIONS TO PROTECT ENVIRONMENT: Do not empty into drains; dispose of this material and its container at hazardous or special waste collection point.

SPILL CLEANUP METHODS: Stop leak if possible without risk. Extinguish all ignition sources. Avoid sparks, flames, heat and smoking. Ventilate. Provide ventilation and confine spill. Do not allow runoff to sewer. Clean-up personnel should use respiratory and/or liquid contact protection. Collect with absorbent, non-combustible material into suitable containers. Dike far ahead of larger spills for later disposal. Ventilate well, stop flow of gas or liquid if possible. Remove ignition sources. Do not allow chemical to enter confined spaces such as sewers due to explosion risk. Sewers designed to preclude formation of explosive concentrations of vapour may be permitted. Spillage may be stored as chemical waste in approved area. **PERSONAL PROTECTION.** Avoid contact with skin or inhalation of spillage, dust or vapour. Wear necessary protective equipment.

7. HANDLING AND STORAGE

USAGE PRECAUTIONS:	Keep away from heat, sparks and open flame. Eliminate all sources of ignition. Ventilate well, avoid breathing vapours. Use approved respirator if air contamination is above accepted level. Do not use in confined spaces without adequate ventilation and/or respirator. Storage tanks and other containers must be grounded. Avoid spilling, skin and eye contact. Wear full protective clothing for prolonged exposure and/or high concentrations.
STORAGE PRECAUTIONS:	Keep in cool, dry, ventilated storage and closed containers. Ground container and transfer equipment to eliminate static electric sparks. Flammable/combustible - Keep away from oxidizers, heat and flames.
STORAGE CRITERIA:	Flammable liquid storage.

8. EXPOSURE CONTROLS AND PERSONAL PROTECTION

INGREDIENT NAME:	CAS No.:	STD	LT EXP 8 Hrs	ST EXP 15 Min
TOLUENE	108-88-3	OES	50 ppm(Sk)	150 ppm(Sk)
SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC	64742-94-5	SUP	300 mg/m3	
PROPAN-2-OL	67-63-0	OES	400 ppm	500 ppm
NAPHTHALENE	91-20-3	EU	10 ppm	15 (IHL) ppm

INGREDIENT COMMENTS: OES = Occupational Exposure Standard.
 SUP = Supplier's recommendation.
 EU = Indicative Values according to Commission Directive 91/322/EEC.

PROTECTIVE EQUIPMENT:



PROCESS CONDITIONS:	Use engineering controls to reduce air contamination to permissible exposure level. Provide eyewash station.
VENTILATION:	Provide adequate general and local exhaust ventilation.
RESPIRATORS:	Seek advice from supervision on the company respiratory protection standard. If ventilation is insufficient, suitable respiratory protection must be provided. Respiratory protection must be used if air concentration exceeds acceptable level. FILTER. Gas cartridge (organic substances).
PROTECTIVE GLOVES:	Nitrile. Viton rubber (fluor rubber). Resistant material.
EYE PROTECTION:	Wear splash-proof eye goggles to prevent any possibility of eye contact.
OTHER PROTECTION:	Wear appropriate clothing to prevent reasonably probable skin contact. Wear air-supplied mask in confined areas.
HYGIENIC WORK PRACTICES:	Wash at the end of each work shift and before eating, smoking and using the toilet. Wash promptly with soap & water if skin becomes contaminated. DO NOT SMOKE IN WORK AREA!

9. PHYSICAL AND CHEMICAL PROPERTIES

APPEARANCE:	Mobile.		
COLOUR:	Dark. Amber.		
ODOUR/TASTE:	Aromatic.		
BOILING POINT (°C, interval):	90	Pressure:	760mmHg
DENSITY/SPECIFIC GRAVITY (g/ml):	0.920	Temperature (°C):	15

VAPOUR DENSITY (air=1):	> 3		
VAPOUR PRESSURE:	~ 2 kPa	Temperature (°C):	25
VISCOSITY (interval):	~ 7 cSt	Temperature (°C):	40
SOLUBILITY DESCRIPTION:	Slightly soluble in water.		
FLASH POINT (°C):	6	Method:	CC (Closed cup).
AUTO IGNITION TEMP. (°C):	440		
FLAMMABILITY LIMIT - LOWER(%):	0.6		
FLAMMABILITY LIMIT - UPPER(%):	7.1		

10. STABILITY AND REACTIVITY

STABILITY:	Normally stable.
CONDITIONS TO AVOID:	Avoid heat, flames and other sources of ignition.
HAZARDOUS DECOMP. PRODUCTS:	Oxides of: Carbon. Sulphur. Nitrogen.

11. TOXICOLOGICAL INFORMATION

Toxicological data	Acute toxicity. LD50. Oral. Rat. 9,000 mg/kg Acute toxicity. LD50. Skin. Rabbit. > 200 mg/kg
INHALATION:	High concentrations of vapours may irritate respiratory system and lead to headache, fatigue, nausea and vomiting.
INGESTION:	Harmful: may cause lung damage if swallowed.
SKIN:	Acts as a defatting agent on skin. May cause cracking of skin, and eczema.
EYES:	Visual disturbances, incl. blurred vision.
MEDICAL CONSIDERATIONS:	Risk of chemical pneumonia after aspiration. Avoid vomiting and normal rinse of stomach because of risk of aspiration.

Component	TOLUENE
Toxicological data	Acute toxicity. LD50. Oral. Rat. 636 mg/kg Acute toxicity. LD50. Skin. Rabbit. 12,124 mg/kg Acute toxicity. LDLo. Oral. Human. 50 mg/kg Acute toxicity. LC50. 1 hour. Inhalation. Rat. > 26,700 ppm
Carcinogenicity	IARC Int. Agency for Cancer Research.
Reproduction toxicity	May cause adverse reproductive effects.

Component	SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC
Toxicological data	Acute toxicity. LD50. Oral. >2,000 mg/kg Acute toxicity. LD50. Skin. >2,000 mg/kg Acute toxicity. LC50. 4 hours. Inhalation. >5 mg/l Sensitization. Skin. Guinea pig. Negative.

Component	PROPAN-2-OL
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Toxicological data	Acute toxicity. LD50. Oral. Rat. 4,700 mg/kg
	Acute toxicity. LD50. Skin. 12,900 mg/kg
	Acute toxicity. LC50. 4 hours. Inhalation. Rat. 16,000 ppm
Carcinogenicity	Consolidated carcinogen list. IARC Group 3 - Not classifiable.
Component	NAPHTHALENE
Toxicological data	Acute toxicity. LDLo. Oral. Human. 100 mg/kg Child (RTECS)
	Acute toxicity. LD50. Oral. Rat. 490 mg/kg (RTECS)
	Acute toxicity. LD50. Skin. Rat. > 2,500 mg/kg (RTECS)
	Acute toxicity. LD50. Oral. Mouse. 533 mg/kg
	Acute toxicity. LD50. Skin. Rabbit. > 20,000 mg/kg
Carcinogenicity	IARC Animal Carcinogen List.

12. ECOLOGICAL INFORMATION

WATER HAZARD CLASSIFICATION:	2
Component	TOLUENE
Ecotoxicological data	
	Acute toxicity. LC50 96 hours fish 7.3-22.8 mg/l
	Bioaccumulation. Bio-concentration factor, BCF. fish 13.2
Partition coefficient (log Pow)	2.69
Component	SOLVENT NAPHTHA (PETROLEUM), HEAVY AROMATIC
Ecotoxicological data	
	Acute toxicity. fish 1<LC/EC/IC50 <=10 mg/l
	Acute toxicity. Daphnia 1<LC/EC/IC50 <=10 mg/l
	Acute toxicity. algae 1<LC/EC/IC50 <=10 mg/l
	Biodegradability. Biological oxygen demand, BOD. 52% (CEFIC)
	Bioaccumulation. Bio-concentration factor, BCF. <100 (CONCAWE)
Partition coefficient (log Pow)	>3.8 - 4.8
Component	PROPAN-2-OL
Ecotoxicological data	
	Acute toxicity. fish 42.5 - 240 mg/l TLm (24-96hr)
Partition coefficient (log Pow)	-0.16 - 0.28
Component	NAPHTHALENE
Ecotoxicological data	
	Acute toxicity. LC50 96 hours fish 1.37 - 3.8 mg/l
LC 50, 96 Hrs, Fish mg/l:	1.37 - 3.8
Partition coefficient (log Pow)	3.01 - 3.45

13. DISPOSAL CONSIDERATIONS

DISPOSAL METHODS:

Recover and reclaim or recycle, if practical. Empty containers must not be burned because of explosion hazard. Environmental manager must be informed of all major spillages. Do not allow runoff to sewer, waterway or ground. Contact specialist disposal companies. Dispose of in accordance with Local Authority requirements.

14. TRANSPORT INFORMATION

LABEL FOR CONVEYANCE:

UN No. ROAD:	1993
UK ROAD PACK GR.:	II
ADR CLASS No.:	3
ADR CLASS:	Class 3: Flammable liquids.
ADR PACK GR.	II
HAZARD No. (ADR):	33 Highly flammable liquid (flash-point below 23°C).
ADR CLASSIFICATION CODE	F1
ADR LABEL No.:	3
HAZCHEM CODE:	3YE
CEFIC TEC(R) No.:	30GF1-I+II
PROPER SHIPPING NAME I:	FLAMMABLE LIQUID, N.O.S. (Toluene, Isopropanol)
PROPER SHIPPING NAME II:	FLAMMABLE LIQUID, N.O.S. (Toluene, Isopropanol)
ROAD TRANSPORT NOTES:	640D
RID CLASS No.:	3
RID PACK GR.	II
UN No. SEA:	1993
IMDG CLASS:	3
IMDG PACK GR.:	II
EmS No.:	F-E, S-E
MARINE POLLUTANT:	No.
UN No., AIR:	1993
ICAO CLASS:	3
AIR PACK GR.:	II

15. REGULATORY INFORMATION

LABEL FOR SUPPLY:**RISK PHRASES:**

R-11 Highly flammable.
 R-36/38 Irritating to eyes and skin.
 R-40 Limited evidence of a carcinogenic effect.
 R-48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation.
 R-51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment.
 R-63 Possible risk of harm to the unborn child.
 R-65 Harmful: may cause lung damage if swallowed.
 R-67 Vapours may cause drowsiness and dizziness.

SAFETY PHRASES:

S-9 Keep container in a well-ventilated place.
 S-16 Keep away from sources of ignition - No Smoking.
 S-26 In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.
 S-36/37 Wear suitable protective clothing and gloves.
 S-60 This material and its container must be disposed of as hazardous waste.
 S-62 If swallowed, do not induce vomiting: seek medical advice immediately and show this container or label.

UK REGULATORY REFERENCES:

The Chemicals (Hazard Information and Packaging for Supply) Regulations 2002, Statutory Instrument 2002 No. 1689. (CHIP 3)

EU DIRECTIVES:

Directive 1999/45/EC
 Directive 2001/58/EC
 Directive 2001/59/EC
 Directive 2001/60/EC
 Directive 2004/73/EC

APPROVED CODE OF PRACTICE:

Safety Data Sheets for Substances and Preparations L62.

GUIDANCE NOTES:

Occupational Exposure Limits EH40.
 Introduction to Local Exhaust Ventilation HS(G)37.

16. OTHER INFORMATION

USER NOTES:

NATIONAL INVENTORY STATUS:
 EINECS/ELINCS (EC): All components listed or exempt.

REVISION COMMENTS:

See Section: 2, 3, 15,

ISSUED BY:

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R-PHRASES (Full Text):

R-11 Highly flammable. R-36 Irritating to eyes. R-67 Vapours may cause drowsiness and

dizziness. R-51/53 Toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. R-65 Harmful: may cause lung damage if swallowed. R-66 Repeated exposure may cause skin dryness or cracking. R-22 Harmful if swallowed. R-40 Limited evidence of a carcinogenic effect. R-50/53 Very toxic to aquatic organisms, may cause long-term adverse effects in the aquatic environment. Not classified. R-36/38 Irritating to eyes and skin. R-38 Irritating to skin. R-48/20 Harmful: danger of serious damage to health by prolonged exposure through inhalation. R-63 Possible risk of harm to the unborn child.

DISCLAIMER:

The data given here is based on current knowledge and experience. This Safety Data Sheet describes the product in terms of safety requirements and does not signify any warranty with regard to the products properties.