

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

Product name	Syntilo 225 R
SDS no.	454498
Use of the substance/mixture	Metalworking fluid - soluble. For specific application advice see appropriate Technical Data Sheet or consult our company representative.
Supplier	Castrol India Ltd Technopolis Knowledge Park Office PO Box 19411 Mahakali Caves Rd Chakala, Andheri (E) Mumbai 400093 Telephone: +91 (022) 66984111/66984112 Toll free: 000800 100 7479 (for use in India only - 24 hours) Carechem Singapore: +65 3158 1198 (24 hours)
EMERGENCY TELEPHONE NUMBER	
E-mail address	MSDSadvice@bp.com

2. Hazards identification

This preparation is classified as dangerous according to Directive 1999/45/EC as amended and adapted.

Human health hazards	Irritating to eyes, respiratory system and skin.
Additional hazards	Defatting to the skin.
Additional information	Not classified as dangerous when diluted below 40%.

See sections 11 and 12 for more detailed information on health effects and symptoms and environmental hazards.

3. Composition/information on ingredients

Highly refined mineral oil, emulsifiers and additives.

Chemical name	CAS no.	%	EINECS / ELINCS.	Classification
Amine neutralised carboxylic acids	Not available.	5 - 10		Xi; R36/38 [1]
Distillates (petroleum), hydrotreated heavy paraffinic	64742-54-7	5 - 10	265-157-1	Not classified. [1] [2]
Distillates (petroleum), solvent-dewaxed heavy paraffinic	64742-65-0	5 - 10	265-169-7	Not classified. [1] [2]
2-aminoethanol	141-43-5	5 - 10	205-483-3	Xn; R20/21/22 [1] [2] C; R34 Xi; R37 R52/53
alcohols, C16-18 and C18-unsatd., ethoxylated	68920-66-1	1 - 5	500-236-9	Xi; R38 [1]
2-(2-butoxyethoxy)ethanol	112-34-5	1 - 5	203-961-6	Xi; R36 [1] [2]
Boric acid	10043-35-3	1 - 5	233-139-2	Repr. Cat. 2; [1] [2] R60, R61
3,3'-methylenebis[5-methyloxazolidine]	66204-44-2	1 - 5	266-235-8	Xn; R21/22 [1] C; R34
Pyridine-2-thiol 1-oxide, sodium salt	3811-73-2	0.1 - 1	223-296-5	Xn; R20/21/22 [1] Xi; R36/38 N; R50

See Section 16 for the full text of the R-phrases declared above.

Type

- [1] Substance classified with a health or environmental hazard
- [2] Substance with a workplace exposure limit
- [3] Substance meets the criteria for PBT according to Regulation (EC) No. 1907/2006, Annex XIII
- [4] Substance meets the criteria for vPvB according to Regulation (EC) No. 1907/2006, Annex XIII
- [5] Substance of equivalent concern

Occupational exposure limits, if available, are listed in Section 8.

4 . First-aid measures

Eye contact	In case of contact, immediately flush eyes with plenty of water for at least 15 minutes. Eyelids should be held away from the eyeball to ensure thorough rinsing. Check for and remove any contact lenses. Get medical attention.
Skin contact	Wash skin thoroughly with soap and water or use recognised skin cleanser. Remove contaminated clothing and shoes. Wash clothing before reuse. Clean shoes thoroughly before reuse. Get medical attention.
Inhalation	If inhaled, remove to fresh air. If not breathing, if breathing is irregular or if respiratory arrest occurs, provide artificial respiration or oxygen by trained personnel. Get medical attention. In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours.
Ingestion	Do not induce vomiting unless directed to do so by medical personnel. Never give anything by mouth to an unconscious person. If unconscious, place in recovery position and get medical attention immediately. Get medical attention if symptoms occur. Wash out mouth with water if person is conscious.
Notes to physician	In case of inhalation of decomposition products in a fire, symptoms may be delayed. The exposed person may need to be kept under medical surveillance for 48 hours. Treatment should in general be symptomatic and directed to relieving any effects.

5 . Fire-fighting measures

Extinguishing media	
Suitable	In case of fire, use water fog, alcohol resistant foam, dry chemical or carbon dioxide extinguisher or spray.
Not suitable	Do not use water jet.
Hazardous decomposition products	Decomposition products may include the following materials: carbon dioxide carbon monoxide nitrogen oxides
Unusual fire/explosion hazards	In a fire or if heated, a pressure increase will occur and the container may burst.
Special fire-fighting procedures	Fire water contaminated with this material must be contained and prevented from being discharged to any waterway, sewer or drain. No action shall be taken involving any personal risk or without suitable training. Promptly isolate the scene by removing all persons from the vicinity of the incident if there is a fire.
Protection of fire-fighters	Fire-fighters should wear appropriate protective equipment and self-contained breathing apparatus (SCBA) with a full face-piece operated in positive pressure mode. Clothing for fire-fighters (including helmets, protective boots and gloves) conforming to European standard EN 469 will provide a basic level of protection for chemical incidents.

6 . Accidental release measures

Personal precautions - For non-emergency personnel	Contact emergency personnel. No action shall be taken involving any personal risk or without suitable training. Evacuate surrounding areas. Keep unnecessary and unprotected personnel from entering. Do not touch or walk through spilt material. Floors may be slippery; use care to avoid falling. Do not breathe vapour or mist. Ensure good ventilation. Put on appropriate personal protective equipment.
Personal precautions - For emergency responders	Entry into a confined space or poorly ventilated area contaminated with vapour, mist or fume is extremely hazardous without the correct respiratory protective equipment and a safe system of work. Wear self-contained breathing apparatus. Wear a suitable chemical protective suit. Chemical resistant boots. See also the information in "For non-emergency personnel".
Environmental precautions	Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers. Inform the relevant authorities if the product has caused environmental pollution (sewers, waterways, soil or air).
Large spill	Immediately contact emergency personnel. Stop leak if without risk. Move containers from spill area. Approach the release from upwind. Prevent entry into sewers, water courses, basements or confined areas. Contain and collect spillage with non-combustible, absorbent material e.g. sand, earth, vermiculite or diatomaceous earth and place in container for disposal according to local regulations. Contaminated absorbent material may pose the same hazard as the spilt product. Dispose of via a licensed waste disposal contractor.
Small spill	Stop leak if without risk. Move containers from spill area. Absorb with an inert material and place in an appropriate waste disposal container. Dispose of via a licensed waste disposal contractor.
Reference to other sections	See Section 1 for emergency contact information. See Section 5 for firefighting measures. See Section 8 for information on appropriate personal protective equipment. See Section 12 for environmental precautions. See Section 13 for additional waste treatment information.

7 . Handling and storage

Handling - Protective measures	Put on appropriate personal protective equipment. Do not ingest. Avoid contact with eyes, skin and clothing. Avoid breathing vapour or mist. Use only with adequate ventilation. Wear appropriate respirator when ventilation is inadequate. Keep in the original container or an approved alternative made from a compatible material, kept tightly closed when not in use. Do not reuse container. Empty containers retain product residue and can be hazardous. During metal working, solid particles from workpieces or tools will contaminate the fluid and may cause abrasions of the skin. Where such abrasions result in a penetration of the skin, first aid treatment should be applied as soon as reasonably possible. The presence of certain metals in the workpiece or tool, such as chromium, cobalt and nickel, can contaminate the metalworking fluid and as a result may induce allergic skin reactions. Avoid prolonged or repeated contact with skin. Evaporation of water from soluble cutting fluids during use may
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Handling - Advice on general occupational hygiene

Storage

lead to an increase in concentration which may result in the development of skin conditions due to irritation and defatting. It is important to monitor fluid strength on a regular basis with a refractometer and maintain it at the recommended concentration. Lubricants from other sources and other contaminants should be minimised. Swarf and other debris should be removed. To maintain optimum performance and minimise bacterial spoilage, machine tool coolant systems should be cleaned on a regular basis.

Eating, drinking and smoking should be prohibited in areas where this material is handled, stored and processed. Wash thoroughly after handling. Remove contaminated clothing and protective equipment before entering eating areas. See also Section 8 for additional information on hygiene measures.

Store and use only in equipment/containers designed for use with this product. Keep away from heat and direct sunlight. Protect from freezing. Keep container tightly closed and sealed until ready for use. Containers that have been opened must be carefully resealed and kept upright to prevent leakage. Do not store in unlabelled containers. Store in accordance with local regulations. Store in a dry, cool and well-ventilated area, away from incompatible materials (see Section 10).

8 . Exposure controls/personal protection

Ingredient name

Distillates (petroleum), hydrotreated heavy paraffinic

Distillates (petroleum), solvent-dewaxed heavy paraffinic
2-aminoethanol

2-(2-butoxyethoxy)ethanol

Boric acid

Occupational exposure limits

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction

ACGIH TLV (United States).

TWA: 5 mg/m³ 8 hours. Issued/Revised: 11/2009 Form: Inhalable fraction

EU OEL (Europe). Absorbed through skin.

TWA: 2.5 mg/m³ 8 hours. Issued/Revised: 2/2006

TWA: 1 ppm 8 hours. Issued/Revised: 2/2006

STEL: 7.6 mg/m³ 15 minutes. Issued/Revised: 2/2006

STEL: 3 ppm 15 minutes. Issued/Revised: 2/2006

EU OEL (Europe).

STEL: 101.2 mg/m³ 15 minutes. Issued/Revised: 2/2006

STEL: 15 ppm 15 minutes. Issued/Revised: 2/2006

TWA: 67.5 mg/m³ 8 hours. Issued/Revised: 2/2006

TWA: 10 ppm 8 hours. Issued/Revised: 2/2006

ACGIH TLV (United States).

STEL: 6 mg/m³ 15 minutes. Issued/Revised: 1/2005 Form: Inhalable fraction

TWA: 2 mg/m³ 8 hours. Issued/Revised: 1/2005 Form: Inhalable fraction

Whilst specific OELs for certain components may be shown in this section, other components may be present in any mist, vapour or dust produced. Therefore, the specific OELs may not be applicable to the product as a whole and are provided for guidance only.

This product contains a preservative that may release trace amounts of formaldehyde during use.

Exposure controls

Occupational exposure controls

Provide exhaust ventilation or other engineering controls to keep the airborne concentrations of vapours below their respective occupational exposure limits.

All activities involving chemicals should be assessed for their risks to health, to ensure exposures are adequately controlled. Personal protective equipment should only be considered after other forms of control measures (e.g. engineering controls) have been suitably evaluated. Personal protective equipment should conform to appropriate standards, be suitable for use, be kept in good condition and properly maintained.

Your supplier of personal protective equipment should be consulted for advice on selection and appropriate standards. For further information contact your national organisation for standards.

The final choice of protective equipment will depend upon a risk assessment. It is important to ensure that all items of personal protective equipment are compatible.

Hygiene measures

Wash hands, forearms and face thoroughly after handling chemical products, before eating, smoking and using the lavatory and at the end of the working period. Ensure that eyewash stations and safety showers are close to the workstation location.

Personal protective equipment

Respiratory protection

Use with adequate ventilation.

In case of insufficient ventilation, wear suitable respiratory equipment.

The correct choice of respiratory protection depends upon the chemicals being handled, the conditions of work and use, and the condition of the respiratory equipment. Safety procedures should be developed for each intended application. Respiratory protection equipment should therefore be chosen in consultation with the supplier/manufacturer and with a full assessment of the working conditions.

Hand protection

General Information:

Because specific work environments and material handling practices vary, safety procedures should be developed for each intended application. The correct choice of protective gloves depends upon the chemicals being handled, and the conditions of work and use. Most gloves provide protection for only a limited time before they must be discarded and replaced (even the best chemically resistant gloves will break down after repeated chemical exposures).

Gloves should be chosen in consultation with the supplier / manufacturer and taking account of a full assessment of the working conditions.

Wear suitable gloves.

Recommended: Nitrile gloves.

Breakthrough time:

Breakthrough time data are generated by glove manufacturers under laboratory test conditions and represent how long a glove can be expected to provide effective permeation resistance. It is important when following breakthrough time recommendations that actual workplace conditions are taken into

account. Always consult with your glove supplier for up-to-date technical information on breakthrough times for the recommended glove type.
Our recommendations on the selection of gloves are as follows:

Continuous contact:

Gloves with a minimum breakthrough time of 240 minutes, or >480 minutes if suitable gloves can be obtained.

If suitable gloves are not available to offer that level of protection, gloves with shorter breakthrough times may be acceptable as long as appropriate glove maintenance and replacement regimes are determined and adhered to.

Short-term / splash protection:

Recommended breakthrough times as above.

It is recognised that for short-term, transient exposures, gloves with shorter breakthrough times may commonly be used. Therefore, appropriate maintenance and replacement regimes must be determined and rigorously followed.

Glove Thickness:

For general applications, we recommend gloves with a thickness typically greater than 0.35 mm.

It should be emphasised that glove thickness is not necessarily a good predictor of glove resistance to a specific chemical, as the permeation efficiency of the glove will be dependent on the exact composition of the glove material. Therefore, glove selection should also be based on consideration of the task requirements and knowledge of breakthrough times.

Glove thickness may also vary depending on the glove manufacturer, the glove type and the glove model. Therefore, the manufacturers' technical data should always be taken into account to ensure selection of the most appropriate glove for the task.

Note: Depending on the activity being conducted, gloves of varying thickness may be required for specific tasks. For example:

- Thinner gloves (down to 0.1 mm or less) may be required where a high degree of manual dexterity is needed. However, these gloves are only likely to give short duration protection and would normally be just for single use applications, then disposed of.
- Thicker gloves (up to 3 mm or more) may be required where there is a mechanical (as well as a chemical) risk i.e. where there is abrasion or puncture potential.

Eye protection

Skin and body

Safety glasses with side shields.

Use of protective clothing is good industrial practice.

Personal protective equipment for the body should be selected based on the task being performed and the risks involved and should be approved by a specialist before handling this product.

Cotton or polyester/cotton overalls will only provide protection against light superficial contamination that will not soak through to the skin. Overalls should be laundered on a regular basis. When the risk of skin exposure is high (e.g. when cleaning up spillages or if there is a risk of splashing) then chemical resistant aprons and/or impervious chemical suits and boots will be required.

Personal protective equipment (Pictograms)



9 . Physical and chemical properties

General information

Appearance

Physical state

Liquid.

Colour

Yellow.

Odour

Mild

Important health, safety and environmental information

Flash point

Closed cup: >100°C (>212°F) [Estimated. Water content interferes with flash point determination.]

pH

9.7 [Conc. (% w/w): 3%]

Boiling point / range

>100°C (>212°F)

Pour point

<0 °C

Density

>1000 kg/m³ (>1 g/cm³) at 20°C

Solubility

Emulsifies in water.

10 . Stability and reactivity

Stability	The product is stable.
Possibility of hazardous reactions	Under normal conditions of storage and use, hazardous polymerisation will not occur. Under normal conditions of storage and use, hazardous reactions will not occur.
Conditions to avoid	High temperatures
Materials to avoid	Reactive or incompatible with the following materials: oxidising materials. Slightly reactive or incompatible with the following materials: acids.
Hazardous decomposition products	Under normal conditions of storage and use, hazardous decomposition products should not be produced.

11 . Toxicological information

Acute toxicity

Effects and symptoms

Eyes	Irritating to eyes.
Skin	Irritating to skin. May cause skin dryness and irritation.
Inhalation	Irritating to respiratory system. Exposure to decomposition products may cause a health hazard. Serious effects may be delayed following exposure. May cause irritation to eyes, nose and throat due to exposure to vapour, mists or fumes.
Ingestion	Ingestion of large quantities may cause nausea and diarrhoea.
Chronic effects	Prolonged or repeated contact can defat the skin and lead to irritation, cracking and/or dermatitis.

12 . Ecological information

Persistence/degradability	Expected to be biodegradable.
Mobility	Liquid. Emulsifies in water.
Environmental hazards	Not classified as dangerous.

13 . Disposal considerations

Disposal considerations / Waste information

The generation of waste should be avoided or minimised wherever possible. Waste product residues should not be disposed of via the sewer but processed in a suitable effluent treatment plant. Dispose of surplus and non-recyclable products via a licensed waste disposal contractor. Disposal of this product, solutions and any by-products should at all times comply with the requirements of environmental protection and waste disposal legislation and any regional local authority requirements. Waste packaging should be recycled. Incineration or landfill should only be considered when recycling is not feasible. This material and its container must be disposed of in a safe way. Care should be taken when handling emptied containers that have not been cleaned or rinsed out. Empty containers or liners may retain some product residues. Avoid dispersal of spilt material and runoff and contact with soil, waterways, drains and sewers.

Special precautions

Diluted Fluid The spent diluted fluid comprises a relatively stable emulsion. Dispose of via an authorised person/ licensed waste disposal contractor or by other suitable waste treatment techniques (e.g. emulsion splitting, coagulation and filtration) approved by the local authority. Spent fluid should never be disposed of down the drain. The aqueous phase should not be discharged into sewage systems unless provided for by local regulations; the non-aqueous phase should be disposed of as undiluted fluid. Note that separated aqueous solutions or effluents may contain metal salts as well as traces of oil and must be checked for conformity in these respects against consents given by the authorities before disposal. Further treatment may be required.

Unused product

Waste code	Waste designation
12 01 09*	machining emulsions and solutions free of halogens

However, deviation from the intended use and/or the presence of any potential contaminants may require an alternative waste disposal code to be assigned by the end user.

Packaging

Waste code	European waste catalogue (EWC)
15 01 10*	packaging containing residues of or contaminated by dangerous substances

14 . Transport information

Not classified as hazardous for transport (ADR/RID, ADN, IMDG, ICAO/IATA)

15 . Regulatory information

Label requirements

Hazard symbol or symbols



Irritant

Indication of danger

Risk phrases

R36/37/38- Irritating to eyes, respiratory system and skin.

Safety phrases

S23- Do not breathe vapour or spray.

S26- In case of contact with eyes, rinse immediately with plenty of water and seek medical advice.

S28- After contact with skin, wash immediately with plenty of water.

S36/37/39- Wear suitable protective clothing, gloves and eye/face protection.

S51- Use only in well-ventilated areas.

Other regulations

REACH Status

The company, as identified in Section 1, sells this product in the EU in compliance with the current requirements of REACH.

United States inventory (TSCA 8b)

All components are listed or exempted.

Australia inventory (AICS)

All components are listed or exempted.

Canada inventory

All components are listed or exempted.

China inventory (IECSC)

All components are listed or exempted.


Japan inventory (ENCS)

At least one component is not listed.

Korea inventory (KECI)

 At least one component is not listed.

Philippines inventory (PICCS)

 At least one component is not listed.

16 . Other information

Full text of R-phrases referred to in sections 2 and 3

R60- May impair fertility.

R61- May cause harm to the unborn child.

R20/21/22- Also harmful by inhalation, in contact with skin and if swallowed.

R21/22- Also harmful in contact with skin and if swallowed.

R34- Causes burns.

R36- Irritating to eyes.

R37- Irritating to respiratory system.

R38- Irritating to skin.

R36/38- Irritating to eyes and skin.

R36/37/38- Irritating to eyes, respiratory system and skin.

R50- Very toxic to aquatic organisms.

R52/53- Harmful to aquatic organisms, may cause long-term adverse effects in the aquatic environment.

History

Date of issue/ Date of revision

11/03/2014.

Date of previous issue

17/09/2013.

Prepared by

Product Stewardship

Notice to reader

 Indicates information that has changed from previously issued version.

All reasonably practicable steps have been taken to ensure this data sheet and the health, safety and environmental information contained in it is accurate as of the date specified below. No warranty or representation, express or implied is made as to the accuracy or completeness of the data and information in this data sheet.

The data and advice given apply when the product is sold for the stated application or applications. You should not use the product other than for the stated application or applications without seeking advice from BP Group.

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