

SECTION-1: Identification of the substance / mixture and the company / undertaking

Catalogue Number	CS-T-59682
Product Name	Nonidet P 40 Substitute
CAS No.	9016-45-9
Category	Impurity
Synonyms	Not available
Brand	Clearsynth Labs Ltd.
Identified uses	Laboratory Chemicals
Uses advised against	Not available
Company	Clearsynth Labs Ltd. Mumbai, India
Emergency Phone #	+91-22-245045900
REACH No.	Not available

SECTION 2: Hazards identification

Disclaimer: This is sample MSDS. Please email sales@clearsynth.com for more details.

2.1 Classification of the substance or mixture-Regulation (EC) No 1272/2008:

Skin irritation (Category 2)
 Serious eye damage/eye irritation (Category 2)
 Acute toxicity (Category 4)

2.2 Label Elements

Signal Word: Warning



Hazard Statement(s)

Code	Statement
H315	Causes skin irritation.
H319	Causes serious eye irritation.

H335	Not available
H412	Not available
H361	Not available
H400	Not available
H411	Toxic to aquatic life with long lasting effects.
H373	Not available
H302	Harmful if swallowed.

Precautionary Statement(s)

Code	Statement
P261	Avoid breathing dust/fume/gas/mist/vapours/spray.
P264	Wash hands thoroughly after handling.
P264+P265	Not available
P271	Use only outdoors or in a well-ventilated area.
P273	Not available
P280	Wear protective gloves/protective clothing/eye protection/face protection.
P302+P352	IF ON SKIN: Wash with plenty of water and soap.
P304+P340	IF INHALED: Remove person to fresh air and keep comfortable for breathing.
P305+P351+P338	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present.
P319	Get medical help if you feel unwell.
P321	Specific treatment (see ... on this label).
P332+P317	If skin irritation occurs: Get medical help.
P337+P317	If eye irritation persists: Get medical help.
P362+P364	Take off contaminated clothing and wash it before reuse.
P403+P233	Store in a well-ventilated place. Keep container tightly closed.
P405	Store locked up.
P501	Dispose of contents/container in accordance with local/regional/national/international regulations.
P203	Not available
P318	Not available
P391	Not available

P260	Not available
P270	Not available
P301+P317	Not available
P330	Not available

SECTION 3: Composition / information on ingredients

3.1 Substance

Component : Nonidet P 40 Substitute

CAS Number : 9016-45-9

Molecular Formula : Not available

Molecular Weight : Not available

Parent Chemical : Not available

Synonyms : Not available

Concentration : Not available

SECTION 4: First aid measures

SECTION 4: First-aid measures

4.1 Description of first aid measures

General advice: Remove contaminated clothing and shoes. Seek medical attention if symptoms persist or develop.

Inhalation: Move person to fresh air. If breathing is difficult, seek medical attention.

Skin contact: Wash with plenty of water and soap. Get medical attention if irritation develops.

Eye contact: Rinse cautiously with water for several minutes. Remove contact lenses if present and easy to do.

Continue rinsing. Seek medical attention if irritation persists.

Ingestion: Rinse mouth. Do not induce vomiting unless directed by medical personnel. Seek medical attention if unwell.

4.2 Most important symptoms and effects, both acute and delayed

Not available.

4.3 Indication of any immediate medical attention and special treatment needed

Treat symptomatically. No data available.

SECTION 5: Firefighting measures

SECTION 5: Fire-fighting measures

5.1 Extinguishing media

Suitable extinguishing media: Use extinguishing measures appropriate to surrounding fire (e.g., water spray, alcohol-resistant foam, dry chemical, carbon dioxide).

Unsuitable extinguishing media: Not available.

5.2 Special hazards arising from the substance or mixture

Hazardous combustion products: Not available.

Specific hazards: Not available.

5.3 Advice for firefighters

Wear self-contained breathing apparatus (SCBA) and full protective gear. Cool containers exposed to fire with water spray. Avoid inhalation of combustion products.

SECTION 6: Accidental release measures

SECTION 6: Accidental release measures

6.1 Personal precautions, protective equipment and emergency procedures

Use appropriate personal protective equipment. Avoid contact with skin and eyes. Avoid breathing mist/vapors/aerosols. Ensure adequate ventilation.

6.2 Environmental precautions

Prevent further leakage or spillage if safe to do so. Avoid release to the environment. Do not allow to enter drains/surface waters/groundwater.

6.3 Methods and material for containment and cleaning up

Contain spill. Absorb with inert material (e.g., sand, earth, vermiculite). Collect into suitable, labeled containers for disposal. Clean contaminated area with water and detergent as appropriate.

6.4 Reference to other sections

See Section 8 for personal protective equipment and Section 13 for disposal considerations.

SECTION-7: Handling and storage

SECTION 7: Handling and storage

7.1 Precautions for safe handling

Handle in accordance with good industrial hygiene and safety practice. Avoid contact with skin, eyes, and clothing. Avoid breathing mist/vapors/aerosols. Use with adequate ventilation. Wash hands thoroughly after handling.

7.2 Conditions for safe storage, including any incompatibilities

Store in a tightly closed container in a cool, dry, well-ventilated place. Protect from moisture and contamination.

Keep away from incompatible materials.

Incompatible materials: Not available.

7.3 Specific end use(s)

Laboratory/research use. Not available.

SECTION 8: Exposure controls / personal protection

SECTION 8: Exposure controls/personal protection

8.1 Control parameters

Occupational exposure limits: No data available.

Biological limit values: Not available.

8.2 Exposure controls

Engineering controls: Provide adequate ventilation. Use local exhaust where mist/vapor/aerosol may be generated.

Personal protective equipment (PPE):

- Eye/face protection: Safety glasses with side shields or chemical splash goggles.
 - Skin protection: Protective gloves. Wear appropriate protective clothing.
 - Respiratory protection: If ventilation is inadequate or aerosol/mist is generated, use appropriate respiratory protection.
- Hygiene measures: Wash hands after handling. Remove contaminated clothing and wash before reuse.
- Environmental exposure controls: Avoid release to the environment.

SECTION 9: Physical and chemical properties

9.1 Information on basic physical and chemical properties

Test	Result
Appearance	No data available
IR spectrum	No data available
pH	No data available
Solubility	No data available

Property	Value
a) Physical State	No data available
b) Color	No data available
c) Odor	No data available
d) pH	No data available
e) Vapour Pressure	No data available
f) Viscosity	No data available
g) Initial Boiling Point and boiling range	No data available
h) Melting Point / Freezing Point	No data available
i) Auto Ignition Temperature	No data available
j) Flash Point	No data available
k) Explosion Limit, Lower	No data available
l) Explosion Limit, Upper	No data available
m) Decomposition Temperature	No data available
n) Loss on Drying	No data available
o) Relative Density	No data available

Property	Value
p) Solubility (in DMSO)	No data available
q) Oxidizing Properties	No data available

SECTION 10: Stability and reactivity

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10.1 Reactivity

No data available.

10.2 Chemical stability

Stable under recommended storage conditions.

10.3 Possibility of hazardous reactions

No data available.

10.4 Conditions to avoid

Not available.

10.5 Incompatible materials

Not available.

10.6 Hazardous decomposition products

Not available.

SECTION 11: Toxicological information

11.1 Information on toxicological effects

- Acute toxicity: /LABORATORY ANIMALS: Acute Exposure/ The effects of surfactants (single dose of 50 or 100 mg/kg) were studied on the contents of metallothionein, heme and hemoproteins and on the activities of heme oxygenase and drug metabolizing enzymes in the liver of male Wistar rats pretreated with phenobarbital or beta-naphthoflavone. Surfactants tested included sodium dodecylsulfate, sodium-n-dodecylbenzenesulfonate and Emulgen-913. Metallothionein content was remarkably increased after the injection of surfactants. Phenobarbital alone decreased the Emulgen-913 induced elevation in the contents of zinc of metallothionein, but did not exert any significant effects on the activities of NADPH-cytochrome-c-reductase or DT-diaphorase. These findings suggest that phenobarbital enhances Emulgen-913 metabolism in vivo, and consequently might reduce the contents of surfactant or its metabolites in the liver. Beta-naphthoflavone alone markedly increased the activity of DT-diaphorase and the content of metallothionein but it decreased the activity of NADPH-cytochrome-c-reductase. The increased metallothionein content or DT-diaphorase activity caused by beta-naphthoflavone were further enhanced by Emulgen-913, while NADPH cytochrome-c-reductase was depressed. Phenobarbital pretreatment did not prevent the increase in heme oxygenase activity caused by Emulgen-913, but beta-naphthoflavone pretreatment slightly inhibited the response to Emulgen-913. Cytochrome p-450 was markedly increased by treatment with phenobarbital or beta-naphthoflavone, but these increases were remarkably depressed by subsequent injection of surfactant. /LABORATORY ANIMALS: Acute Exposure/ The influence of in vivo administration of detergents on the hepatic microsomal cytochrome P-450 system was studied in rat. Male Wistar rats were administered detergents, Emulgen 913 (50 mg or 100 mg/kg of body wt or sodium dodecylsulfate (25 mg or 50 mg/kg of body wt) ip once a day for 3 days. Cytochrome P-450 content in liver microsomes was significantly decreased to 85% and 73% of control by the administration of 50 mg or 100 mg Emulgen, respectively, but the microsomal protein concentration

was not changed by these administrations. The content of cytochrome P-450 was also reduced to 76% and 70% of control by the administration of 25 mg or 50 mg sodium dodecylsulfate/kg of body wt, respectively. The total hydroxylation activity (the sum of omega- and (omega-1)-hydroxylase activity) of laurate almost paralleled the decrease in cytochrome P-450 in detergent-treated rats. However, the omega/omega-1-hydroxylation ratio was not changed. These results suggest that the administration of these detergents lowered the level of cytochrome P-450 species catalyzing omega- and (omega-1)-hydroxylation of laurate to a similar extent. On the other hand, aminopyrine N- and p-nitroanisole O-demethylation activities in Emulgen 913-treated rats was decreased while those in sodium dodecylsulfate-treated rats did not change, though the content of cytochrome P-450 was decreased by both administrations

- Skin corrosion/irritation: No data available.
- Serious eye damage/eye irritation: No data available.
- Respiratory or skin sensitization: No data available.
- Germ cell mutagenicity: No data available.
- Carcinogenicity: No data available.
- Reproductive toxicity: /AQUATIC SPECIES/ The ability of nonylphenol polyethoxylate (nonylphenyl polyethylene glycol, NPPG) to alter the metabolic elimination of testosterone and elicit reproductive toxicity to *Daphnia magna* was assessed. NPPG (5.0 mg/L) inhibited the elimination of testosterone as glucose and sulfate conjugates, but had minimal effect on the rate of elimination of oxido-reduced and hydroxylated derivatives of the steroid hormone. This exposure concentration of NPPG also approximated the acute threshold-effect concentration and the chronic value for daphnids. Results demonstrated that NPPG qualitatively elicits similar effects on the metabolic elimination of testosterone by daphnids as previously characterized with its degradation product 4-nonylphenol. Unlike 4-nonylphenol, significant chronic toxicity of NPPG, due to effects on steroid elimination processes, was not evident.
- STOT-single exposure: No data available.
- STOT-repeated exposure: /AQUATIC SPECIES/ The toxicity of the nonylphenol polyethoxylate, R-11 and the neonicotinoid insecticide, imidacloprid were evaluated on the crustacean, *Ceriodaphnia dubia* Richard. These compounds were evaluated separately and as a mixture because they are applied for pest control and may exist as a binary mixture in surface water. Acute mortality estimates (48hr) were developed followed by population-level studies after chronic exposure. LC50s and 95% CL for R-11 and imidacloprid were 9241(8521-9842)ug/L and 2.1 (1.1-3.4)ug/L, respectively. In the population study, *C. dubia* were exposed to concentrations equivalent to the acute LC25 for R-11 (8090 ug/L) and imidacloprid (0.3 ug/L) separately and as a mixture for 8d. The results of the chronic study indicated that R-11 had a greater impact on population parameters than imidacloprid and the mixture had a greater impact than either compound alone. For example, the total number of individuals at the end of the chronic study was 73%, 19%, and 6% of the control for imidacloprid, R-11, and the binary mixture, respectively. Additionally, exposure to R-11, imidacloprid, and the mixture resulted in 52%, 10%, and 91% reductions in population growth rate compared to the control, respectively. The results of this study indicate that when combined, R-11 and imidacloprid act in a more than additive manner. Therefore, it is important that their potential effects on aquatic organisms be evaluated together. /AQUATIC SPECIES/ The ability of nonylphenol polyethoxylate (nonylphenyl polyethylene glycol, NPPG) to alter the metabolic elimination of testosterone and elicit reproductive toxicity to *Daphnia magna* was assessed. NPPG (5.0 mg/L) inhibited the elimination of testosterone as glucose and sulfate conjugates, but had minimal effect on the rate of elimination of oxido-reduced and hydroxylated derivatives of the steroid hormone. This exposure concentration of NPPG also approximated the acute threshold-effect concentration and the chronic value for daphnids. Results demonstrated that NPPG qualitatively elicits similar effects on the metabolic elimination of testosterone by daphnids as previously characterized with its degradation product 4-nonylphenol. Unlike 4-nonylphenol, significant chronic toxicity of NPPG, due to effects on steroid elimination processes, was not evident.
- Aspiration hazard: No data available.

Likely routes of exposure

- No data available.

Symptoms related to the physical, chemical and toxicological characteristics

- /LABORATORY ANIMALS: Acute Exposure/ The effects of surfactants (single dose of 50 or 100 mg/kg) were studied on the contents of metallothionein, heme and hemoproteins and on the activities of heme oxygenase and drug metabolizing enzymes in the liver of male Wistar rats pretreated with phenobarbital or beta-naphthoflavone. Surfactants tested included sodium dodecylsulfate, sodium-n-dodecylbenzenesulfonate and Emulgen-913. Metallothionein content was remarkably increased after the injection of surfactants. Phenobarbital alone decreased the Emulgen-913 induced elevation in the contents of zinc of metallothionein, but did not exert any significant effects on the activities of NADPH-cytochrome-c-reductase or DT-diaphorase. These findings suggest that phenobarbital enhances Emulgen-913 metabolism in vivo, and consequently might reduce the contents of surfactant or its metabolites in the liver. Beta-naphthoflavone alone markedly increased the activity of DT-diaphorase and the content of metallothionein but it decreased the activity of NADPH-cytochrome-c-reductase. The increased metallothionein content or DT-diaphorase activity caused by beta-naphthoflavone were further enhanced by Emulgen-913, while NADPH cytochrome-c-reductase was depressed. Phenobarbital pretreatment did not prevent the increase in heme oxygenase activity caused by Emulgen-913, but beta-naphthoflavone pretreatment slightly inhibited the response to Emulgen-913. Cytochrome p-450 was markedly increased by treatment with phenobarbital or beta-naphthoflavone, but these increases were remarkably depressed by subsequent injection of surfactant.

SECTION 12: Ecological information

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12.1 Toxicity

No data available.

12.2 Persistence and degradability

No data available.

12.3 Bioaccumulative potential

No data available.

12.4 Mobility in soil

No data available.

12.5 Results of PBT and vPvB assessment

Not available.

12.6 Endocrine disrupting properties

Not available.

12.7 Other adverse effects

No data available.

SECTION 13: Disposal considerations

SECTION 13: Disposal considerations

13.1 Waste treatment methods

Dispose of contents/container in accordance with local/regional/national/international regulations. Do not discharge to drains.

Waste classification: Not available.

Contaminated packaging: Dispose of as unused product unless cleaned.

SECTION 14: Transport information

SECTION 14: Transport information

14.1 UN number

Not available.

14.2 UN proper shipping name

Not available.

14.3 Transport hazard class(es)

Not available.

14.4 Packing group

Not available.

14.5 Environmental hazards

Not available.

14.6 Special precautions for user

Not available.

14.7 Maritime transport in bulk according to IMO instruments

Not available.

SECTION 15: Regulatory information

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15.1 Safety, health and environmental regulations/legislation specific for the substance or mixture

Not available.

15.2 Chemical safety assessment

Not available.

SECTION 16: Other information

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Catalog No.: CS-T-59682

CAS No.: 9016-45-9

Supplier: Clearsynth Labs Ltd., Mumbai, India

Emergency phone: +91-22-245045900

Revision date: Not available.

Disclaimer: The information provided is believed to be accurate based on available data, but no warranty is expressed or implied. Users are responsible for determining suitability for their particular application and for compliance with applicable regulations.

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