



SAFETY DATA SHEET

According to the Hazard Communication Standard, 29 CFR 1910.1200

SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

1. IDENTIFICATION

Product identifier

Product name SPIRIT 990 S

Other means of identification

Product Code(s) 083811

Number 89C
Substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Identified uses Metalworking fluid.

Uses advised against Do not use for any purpose other than the one for which it is intended

Details of the supplier of the safety data sheet

Supplier Address TOTAL Specialties USA Inc
 1201 Louisiana Street, Suite 1800
 Houston, TX 77002
 Phone: +1 800 323 3198

Contact Point Technical/ HSEQ

E-mail Address USRMLIN-info@total.com

Emergency telephone number

Company Phone Number +1 (908) 862-9300
Emergency telephone CHEMTREC: +1 800 424 9300 (24h)

2. HAZARDS IDENTIFICATION

Classification

Serious eye damage/eye irritation - Category 2A
 Skin sensitization - Category 1

Label elements

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

**WARNING**

Causes serious eye irritation
May cause an allergic skin reaction

Precautionary Statements - Prevention

Wash face, hands and any exposed skin thoroughly after handling
Avoid breathing dust/fume/gas/mist/vapours/ spray
Contaminated work clothing should not be allowed out of the workplace
Wear protective gloves/protective clothing/eye protection/face protection

Precautionary Statements - Response

Specific treatment (see Section 4 on this label)

Eyes

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
If eye irritation persists: Get medical advice/attention

Skin

IF ON SKIN: Wash with plenty of soap and water
If skin irritation or rash occurs: Get medical advice/attention
Wash contaminated clothing before reuse

Precautionary Statements - Disposal

Dispose of contents/ container to an approved waste disposal plant

Unknown Acute Toxicity

No information available

Hazards not otherwise classified (HNOC)

None known

Other information

Physical-Chemical Properties Contaminated surfaces will be extremely slippery.

Environmental properties Should not be released into the environment.

3. COMPOSITION/INFORMATION ON INGREDIENTS

Chemical Name	CAS-No	Weight %
Distillates (petroleum), hydrotreated heavy naphthenic	64742-52-5	40 - 50

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

TRIETHANOLAMINE	102-71-6	1 - 5
Hexylene glycol	107-41-5	1-5
Diisopropanolamine	110-97-4	1-5
ALCOHOL C9-11, ETHOXYLATED	68439-46-3	1-5
3-iodo-2-propynyl butylcarbamate	55406-53-6	0.1-1

** The exact percentage (concentration) of composition has been withheld as a trade secret****

4. FIRST AID MEASURES**First aid measures for different exposure routes**

General advice	IN CASE OF SERIOUS OR PERSISTENT CONDITIONS, CALL A DOCTOR OR EMERGENCY MEDICAL CARE. Show this material safety data sheet to the doctor in attendance. Take off contaminated clothing and shoes immediately. May cause allergic skin reaction.
Eye contact	Rinse thoroughly with plenty of water, also under the eyelids. Keep eye wide open while rinsing. Get medical attention immediately if symptoms occur. Check for and remove any contact lenses.
Skin contact	Remove contaminated clothing and shoes. Wash off with soap and water. Wash contaminated clothing before reuse. If skin irritation persists, call a physician.
Inhalation	Inhalation of high concentrations of vapor or aerosols may cause irritation of the upper respiratory tract. Move to fresh air. Remove from exposure, lie down. If symptoms persist, call a physician. If breathing is difficult, give oxygen. If not breathing, give artificial respiration. Loosen tight clothing. Irrespective of the current state of the casualty, always monitor for signs of breathing difficulty or aspiration for at least 48-72 hours.
Ingestion	If swallowed, do not induce vomiting - seek medical advice. Smallest quantities reaching the lungs through swallowing or subsequent vomiting may result in lung edema or pneumonia. Never give anything by mouth to an unconscious person. Rinse mouth. Remove from exposure, lie down.

Most important symptoms/effects, acute and delayed

Skin contact	May cause an allergic skin reaction. Causes mild skin irritation. Avoid contact with skin and clothing.
Eye contact	Causes serious eye irritation.
Inhalation	Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.
Symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Itching. Redness.

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

Indication of immediate medical attention and special treatment needed, if necessary

Notes to physician Treat symptomatically.

5. FIRE-FIGHTING MEASURES

Suitable Extinguishing Media The product is not combustible. Use extinguishing measures that are appropriate to local circumstances and the surrounding environment. Foam. Carbon dioxide (CO₂). ABC powder.

Unsuitable Extinguishing Media Do not use a solid water stream as it may scatter and spread fire.

Special Hazard Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot. These may be highly dangerous if inhaled in confined spaces or at high concentration. The potential danger appears only after the evaporation of the water in the product, i.e. during fire or after accidental projection of the product on a very hot surface.

Explosion Data

Sensitivity to Mechanical Impact None.
Sensitivity to Static Discharge None.

Protective Equipment and Precautions for Firefighters As in any fire, wear self-contained breathing apparatus pressure-demand, MSHA/NIOSH (approved or equivalent) and full protective gear. Evacuate non-essential personnel.

6. ACCIDENTAL RELEASE MEASURES**Personal precautions, protective equipment and emergency procedures**

General Information Do not touch or walk through spilled material. Contaminated surfaces will be extremely slippery. Use personal protective equipment. Ensure adequate ventilation. Remove all sources of ignition. Evacuate personnel to safe areas. Avoid contact with the skin and the eyes. Keep people away from and upwind of spill/leak.

Other information See Section 12 for additional information.

Environmental precautions

General Information Do not allow material to contaminate ground water system. Try to prevent the material from entering drains or water courses. Local authorities should be advised if significant spillages cannot be contained. See Section 12 for additional Ecological Information.

Methods and materials for containment and cleaning up

Methods for cleaning up Dam up. Keep in suitable, closed containers for disposal. Soak up with inert absorbent material. 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). Use mechanical means such as pumps, skimmers and absorbent materials.

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling

When using, do not eat, drink or smoke. For personal protection see section 8. Use only in well-ventilated areas. Do not breathe vapors or spray mist. Avoid contact with skin, eyes and clothing. Handle in accordance with good industrial hygiene and safety practice. Wear personal protective equipment.

Prevention of fire and explosion

Take precautionary measures against static discharges: Ground/bond containers, tanks and transfer/receiving equipment.

Hygiene measures

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets. When using, do not eat, drink or smoke. Use personal protective equipment as required. Wash hands before breaks and at the end of workday. Avoid breathing vapors, mist or gas. Avoid prolonged and repeated contact with the skin, especially with used or waste product.

Conditions for safe storage, including any incompatibilities

Technical measures/Storage conditions

Keep away from food, drink and animal feedingstuffs. Keep in a bonded area. Keep container tightly closed. Keep preferably in the original container. Otherwise reproduce all indication of the regulation label on the new container. Do not remove the hazard labels of the containers (even if they are empty). Design the installations in order to avoid accidental emissions of product (due to seal breakage, for example) onto hot casings or electrical contacts. Protect from frost, heat and sunlight. Protect from moisture. Keep in a bonded area. Store in original container. Keep in properly labeled containers.

Materials to Avoid

Acids. Strong oxidizing agents.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure limits

Mineral oil mist:

USA: OSHA (PEL) TWA 5 mg/m³, NIOSH (REL) TWA 5 mg/m³, STEL 10 mg/m³, ACGIH (TLV) TWA 5 mg/m³ (highly refined).

Chemical Name	ACGIH TLV	OSHA PEL	NIOSH IDLH
TRIETHANOLAMINE 102-71-6	TWA 5 mg/m ³	-	
Hexylene glycol 107-41-5	Ceiling 25 ppm	(vacated) Ceiling: 25 ppm (vacated) Ceiling: 125 mg/m ³	Ceiling: 25 ppm Ceiling: 125 mg/m ³

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

Exposure controls

Engineering Measures

Apply technical measures to comply with the occupational exposure limits. When working in confined spaces (tanks, containers, etc.), ensure that there is a supply of air suitable for breathing and wear the recommended equipment.

Individual protection measures, such as personal protective equipment

General Information

Protective engineering solutions should be implemented and in use before personal protective equipment is considered.

Eye/Face Protection

If splashes are likely to occur, wear: Safety glasses with side-shields.

Skin and body protection

Wear suitable protective clothing. Protective shoes or boots.

Hand Protection

Impervious butyl rubber gloves. Nitrile rubber. Fluorinated rubber. Please observe the instructions regarding permeability and breakthrough time which are provided by the supplier of the gloves. Also take into consideration the specific local conditions under which the product is used, such as the danger of cuts, abrasion, and the contact time.

Respiratory protection

None required under normal usage. If exposure limits are exceeded or irritation is experienced, NIOSH/MSHA approved respiratory protection should be worn. Positive-pressure supplied air respirators may be required for high airborne contaminant concentrations. Respiratory protection must be provided in accordance with current local regulations.

Hygiene measures

Ensure the application of strict rules of hygiene by the personnel exposed to the risk of contact with the product. Regular cleaning of equipment, work area and clothing is recommended. Wash hands before breaks and immediately after handling the product. Do not use abrasives, solvents or fuels. Do not dry hands with rags that have been contaminated with product. Do not put product contaminated rags into workwear pockets. When using, do not eat, drink or smoke. Use personal protective equipment as required. Wash hands before breaks and at the end of workday. Avoid breathing vapors, mist or gas. Avoid prolonged and repeated contact with the skin, especially with used or waste product.

9. PHYSICAL AND CHEMICAL PROPERTIES

Physical and chemical properties

Color	amber
Physical State @20°C	liquid
Odor	Petroleum distillates
Odor Threshold	No information available

<u>Property</u>	<u>Values</u>	<u>Remarks</u>	<u>Method</u>
pH		No information available	
pH (as aqueous solution)	9.3	solution (10 %)	

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

Melting point/range		No information available
Boiling point/boiling range		Not applicable
Flash point	> 150 °C > 302 °F	
Evaporation rate		No information available
Flammability Limits in Air		No information available
upper	-	No information available
Lower	-	No information available
Vapor Pressure		No information available
Vapor density	> 5	(Air = 1)
Relative density	0.959	@ 15 °C
Density	959 kg/m ³	@ 15 °C
Water solubility		soluble
Solubility in other solvents		No information available
logPow		No information available
Autoignition temperature		No information available
Decomposition temperature		No information available
Viscosity, kinematic		No information available
Explosive properties	Not explosive	
Oxidizing Properties	Not applicable	
Possibility of hazardous reactions	Not applicable	
Other information		
Specific Gravity	0.959	@ 15 °C
Freezing Point		No information available
Pour point		No information available

10. STABILITY AND REACTIVITY

<u>Reactivity</u>	No information available.
<u>Chemical stability</u>	Stable under recommended storage conditions.
<u>Possibility of hazardous reactions</u>	None under normal processing.
<u>Conditions to Avoid</u>	Heat (temperatures above flash point), sparks, ignition points, flames, static electricity. Heat, flames and sparks. Take precautionary measures against static discharges. Strong oxidizing agents.
<u>Incompatible Materials</u>	Acids. Strong oxidizing agents.
<u>Hazardous Decomposition Products</u>	Incomplete combustion and thermolysis may produce gases of varying toxicity such as carbon monoxide, carbon dioxide, various hydrocarbons, aldehydes and soot.

11. TOXICOLOGICAL INFORMATION**Acute toxicity**

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

Product Information Product does not present an acute toxicity hazard based on known or supplied information.

Information on likely routes of exposure

Principle Routes of Exposure Inhalation, Ingestion, Eye contact, Skin contact.

Numerical measures of toxicity

ATEmix (oral)	67949 mg/kg
ATEmix (dermal)	72756 mg/kg
Inhalation	
ATEmix (inhalation-dust/mist)	115.9 mg/l
ATEmix (inhalation-vapor)	1005 mg/l

Component Information

Chemical Name	LD50 Oral	LD50 Dermal	LC50 Inhalation
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	> 5000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	LC50 (4h) 5.53 mg/l (Rat - Aerosol - OECD 403)
TRIETHANOLAMINE 102-71-6	LD50 8000 mg/kg (Rat) LD50 5300 mg/kg (Guinea Pig)	LD50 > 20000 mg/kg (Rabbit)	
Hexylene glycol 107-41-5	LD0 >=2000 mg/kg bw (rat-OECD 420)	8560 µl/kg (Rabbit) LD0 >=2000 mg/kg bw (rat-OECD 402)	> 310 mg/m ³ (Rat) 1 h
Diisopropanolamine 110-97-4	> 2000 mg/kg bw (Rat)	8000 mg/kg bw (Rabbit)	
ALCOHOL C9-11, ETHOXYLATED 68439-46-3	-	> 2 g/kg (Rabbit)	
3-iodo-2-propynyl butylcarbamate 55406-53-6	LD50 1470 mg/kg (Rat)	LD50 > 2000 mg/kg (Rabbit)	LD50 (4h) 1.5 mg/l (Rat - Particulate)

Information on toxicological effects

Symptoms	Symptoms of overexposure may be headache, dizziness, tiredness, nausea and vomiting. Itching. Redness.
Skin contact	May cause an allergic skin reaction. Causes mild skin irritation. Avoid contact with skin and clothing.
Eye contact	Causes serious eye irritation.
Inhalation	Not classified. Inhalation of vapors in high concentration may cause irritation of respiratory system.
Ingestion	Not classified. Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhea.

Delayed and immediate effects as well as chronic effects from short and long-term exposure

Serious eye damage/eye irritation	Irritating to eyes.
Sensitization	May cause an allergic skin reaction. Contains sensitizer(s).

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

Carcinogenicity This product is not classified carcinogenic.

Chemical Name	ACGIH	IARC	NTP	OSHA
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5	-	-		-

Mutagenicity This product is not classified as mutagenic.
Reproductive toxicity This product does not present any known or suspected reproductive hazards.
Other adverse effects Repeated exposure may cause skin dryness or cracking. Characteristic skin lesions (pimples) may develop following prolonged and repeated exposures (contact with contaminated clothing).
Aspiration Hazard Not classified.

12. ECOLOGICAL INFORMATION**Ecotoxicity****Acute aquatic toxicity - Product Information**

No information available

Acute aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to fish	Toxicity to daphnia and other aquatic invertebrates	Toxicity to microorganisms
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5		LC50 (96h) > 100 mg/l (Pimephales promelas - static - OECD 203)	EL50 (48h) > 10000 mg/l (Daphnia magna - static - OECD 202)	
TRIETHANOLAMINE 102-71-6		LC50(96h) 10610 - 13010 mg/l (Pimephales promelas)	EC50(48h) 565.2 - 658.3 mg/l (Ceriodaphnia dubia) LC50 (24h) 2038 mg/l (Daphnia magna)	
Hexylene glycol 107-41-5	EC50 (72h) >429 mg/l (Pseudokirchnerella subcapitata - OECD 201) EC10 (72h) >429 mg/l (Pseudokirchnerella subcapitata - OECD 201)	LC50 (96h) 10500-11000 mg/l (Pimephales promelas - OECD 203) LC50 (96h) 10000 mg/l (Lepomis macrochirus - OECD 203) LC50 (96h) 8690 mg/L (Pimephales promelas - OECD 203) LC50 (96h) 10700 mg/l (Pimephales promelas - OECD 203)	EC50 (48h) 2700-3700 mg/l (Daphnia magna) LC50 (96h) 16500 mg/l (Oronectes immunis)	EC50 = 3038 mg/L 5 min
Diisopropanolamine 110-97-4	EC50 (72h) = 270 mg/L Desmodesmus subspicatus	LC50 (96h) 1466 mg/L Danio rerio (OECD 403)	EC50 (48h) = 277.7 mg/l Daphnia magna	
3-iodo-2-propynyl butylcarbamate 55406-53-6	EC50 (72h) 0.022 mg/l Scenedesmus subspicatus	LC50 (96h) 0.067 mg/l Rainbow trout	EC50 (48h) 0.16 mg/l Daphnia magna	

Chronic aquatic toxicity - Product Information

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

No information available

Chronic aquatic toxicity - Component Information

Chemical Name	Toxicity to algae	Toxicity to daphnia and other aquatic invertebrates	Toxicity to fish	Toxicity to microorganisms
Distillates (petroleum), hydrotreated heavy naphthenic 64742-52-5		NOEL (21d) 10 mg/l (Daphnia magna - semi static - OECD 211)		
Hexylene glycol 107-41-5	NOEC (72h) 429 mg/l (Pseudokirchnerella subcapitata - OECD 201)			

Effects on terrestrial organisms No information available.**Persistence and degradability****General Information** No information available.**Bioaccumulative potential****Product Information** No information available.**logPow** No information available**Component Information**

Chemical Name	log Pow
Hexylene glycol 107-41-5	0.14
Diisopropanolamine 110-97-4	-0.79
3-iodo-2-propynyl butylcarbamate 55406-53-6	2.81

Mobility

Soil Given its physical and chemical characteristics, the product is generally mobile in the ground

Water soluble

Other adverse effects**General Information** No information available**13. DISPOSAL CONSIDERATIONS****Waste treatment****Waste Disposal Methods** Dispose of in accordance with local regulations.

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

Contaminated packaging

Empty containers should be taken to an approved waste handling site for recycling or disposal.

14. TRANSPORT INFORMATION

<u>DOT</u>	Not regulated
<u>TDG</u>	Not regulated
<u>MEX</u>	Not regulated
<u>ICAO/IATA</u>	Not regulated
<u>IMDG/IMO</u>	Not regulated
<u>ADR/RID</u>	Not regulated
<u>ADN</u>	Not regulated

15. REGULATORY INFORMATION**International Inventories**

All the substances contained in this product are listed or exempted from listing in the following inventories:
U.S.A. (TSCA)

U.S. Federal Regulations**SARA 313**

Section 313 of Title III of the Superfund Amendments and Reauthorization Act of 1986 (SARA). This product does not contain any chemicals which are subject to the reporting requirements of the Act and Title 40 of the Code of Federal Regulations, Part 372.

SARA 311/312 Hazard Categories

Acute Health Hazard	Yes
Chronic Health Hazard	no***
Fire Hazard	no
Sudden Release of Pressure Hazard	no
Reactive Hazard	no

Clean Water Act

This product does not contain any substances regulated as pollutants pursuant to the Clean Water Act (40 CFR 122.21 and 40 CFR 122.42).

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29

Revision Date: 2015-10-13

Version 2.01

Clean Air Act, Section 112 Hazardous Air Pollutants (HAPs) (see 40 CFR 61)

This product contains the following HAPs:

Chemical Name	CAS-No	Weight %	HAPS data	VOC Chemicals	Class 1 Ozone Depletors	Class 2 Ozone Depletors
TRIETHANOLAMINE	102-71-6	1 - 5		Group I		

CERCLA

This material, as supplied, does not contain any substances regulated as hazardous substances under the Comprehensive Environmental Response Compensation and Liability Act (CERCLA) (40 CFR 302) or the Superfund Amendments and Reauthorization Act (SARA) (40 CFR 355). There may be specific reporting requirements at the local, regional, or state level pertaining to releases of this material.

U.S. State Regulations**California Proposition 65**

This product does not contain any Proposition 65 chemicals.

U.S. State Right-to-Know Regulations

Chemical Name	Massachusetts	New Jersey	Pennsylvania	Illinois
Diisopropanolamine 110-97-4	X		X	
Hexylene glycol 107-41-5	X	X	X	

16. OTHER INFORMATION

NFPA	Health Hazard 2***	Flammability 1	Instability 0	Physical and chemical hazards -
HMIS	Health Hazard 2***	Flammability 1	Physical Hazard 0	Personal protection X

NFPA (National Fire Protection Association)

HMIS (Hazardous Material Information System)

Hazards are split into categories each with a 0 to 4 rating, 0 meaning no hazard and 4 meaning high hazard

Revision Date: 2015-10-13
Revision Note (M)SDS sections updated: 2, 3, 4, 11, 15
Abbreviations, acronyms

Version GNAM



SDS # : 083811

SPIRIT 990 S

Date of the previous version: 2015-06-29**Revision Date:** 2015-10-13**Version** 2.01

Legend

Section 8

ACGIH - American Conference of Governmental Industrial Hygienists

OSHA - Occupational Safety and Health Administration

NIOSH - National Institute for Occupational Safety and Health

TLV - Threshold Limit Values

PEL - Permissible Exposure Limits

IDLH - Immediately Dangerous to Life or Health concentrations

TWA - Time Weight Average

STEL - Short Term Exposure Limits

S* - Skin notation

TSCA - Toxic Substance Control Act

This safety data sheet serves to complete but not to replace the technical product sheets. The information contained herein is given in good faith and is accurate to the best of knowledge at the date indicated above. It is understood by the user that any use of the product for purposes other than those for which it was designed entails potential risk. The information given herein in no way dispenses the user from knowing and applying all provisions regulating his activity. The user bears sole liability for the precautions required when using the product. The regulatory texts indicated herein are intended to aid the user to fulfil his obligations. This list is not to be considered complete and exhaustive. It is the user's responsibility to ensure that he is subject to no other obligations than those mentioned.

End of the safety data sheet

Version GNAM