SAFETY DATA SHEET

Revision date: 30-Jan-2023

Revision Number 1

1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

Product identifier

Product Name STEOL CS-460

Product Code(s) 000000016585

Other means of identification

Proper shipping name ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)

UN number 1170

Synonyms STECS460-204

Recommended use of the chemical and restrictions on use

Recommended use Surfactant.
For industrial use only.

Uses advised against No information available

Supplier
Ixom Operations Pty Ltd
ABN: 51 600 546 512
Level 8, 1 Nicholson Street
Melbourne 3000
Australia

Telephone Number: +61 3 9906 3000

Emergency telephone number

Emergency telephone number **1 800 033 111 (ALL HOURS)**

Please ensure you refer to the limitations of this Safety Data Sheet as set out in the "Other Information" section at the end of this Data Sheet.

2. HAZARDS IDENTIFICATION

GHS Classification

Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

Flammable liquids	Category 3
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 1

SIGNAL WORD

Danger

Label elements

Flame
Corrosion

Hazard statements
H226 - Flammable liquid and vapor
H315 - Causes skin irritation
H318 - Causes serious eye damage

Precautionary Statements - Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking
Keep container tightly closed
Ground/bond container and receiving equipment
Use only non-sparking tools
Take precautionary measures against static discharge
Use explosion-proof electrical, ventilating, lighting equipment
Wash face, hands and any exposed skin thoroughly after handling
Wash eyes thoroughly after handling.
Wear protective gloves / protective clothing / eye protection / face protection
Precautionary Statements - Response

IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing
Immediately call a POISON CENTER or doctor/physician
IF ON SKIN: Wash with plenty of soap and water
IF ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower
Call a POISON CENTER or doctor/physician if you feel unwell
Take off contaminated clothing and wash before reuse
In case of fire: Use CO_2, dry chemical, or foam for extinction
Precautionary Statements - Storage
Store in a well-ventilated place. Keep cool
Precautionary Statements - Disposal
Dispose of contents/container in accordance with local, regional, national, and international regulations as applicable

Other hazards which do not result in classification
Toxic to aquatic life
Harmful to aquatic life with long lasting effects

Poisons Schedule (SUSMP) None allocated

3. COMPOSITION/INFORMATION ON INGREDIENTS

Mixture

Chemical name	CAS No.	Weight-%
Sodium lauryl ether sulphate	9004-82-4	58-<61
Water	7732-18-5	23-<27
Ethyl alcohol (Ethanol)	64-17-5	13-<16
Alcohols, C12-15, ethoxylated	68131-39-5	0-3
Other component(s)	-	to 100

4. FIRST AID MEASURES

Description of first aid measures

General advice For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.

Inhalation Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. Call a physician if symptoms occur.

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. Keep eye wide open while rinsing. Do not rub affected area. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if irritation develops and persists.

Skin contact Wash off immediately with soap and plenty of water while removing all contaminated clothes and shoes. Call a physician if symptoms occur.

Ingestion Clean mouth with water and drink afterwards plenty of water. Never give anything by mouth to an unconscious person. Do NOT induce vomiting. Get medical attention if symptoms occur.

Self-protection of the first aider Remove all sources of ignition. Ensure that medical personnel are aware of the material(s) involved, take precautions to protect themselves and prevent spread of contamination. Avoid contact with skin, eyes, and clothing. Use personal protective equipment as required. See section 8 for more information.

Most important symptoms and effects, both acute and delayed

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness).

Indication of any immediate medical attention and special treatment needed

Note to physicians Treat symptomatically. Can cause corneal burns.

5. FIRE FIGHTING MEASURES

Suitable Extinguishing Media

Suitable Extinguishing Media Alcohol resistant foam is the preferred firefighting medium but, if it is not available, fine water spray or water fog can be used.

Unsuitable extinguishing media Solid water jet/stream may scatter and spread the fire.

Specific hazards arising from the chemical

Specific hazards arising from the chemical Flammable. Risk of ignition. Vapors can form explosive mixtures with air. Vapors may travel to source of ignition and flash back. Keep product and empty container away from heat and sources of ignition. Static accumulating flammable liquid can become electrostatically charged even in bonded and grounded equipment. Sparks may ignite liquid and vapor. May cause flash fire or explosion. In the event of fire, cool tanks with water spray. Fire residues and contaminated fire extinguishing water must be disposed of in accordance with local regulations.

Hazardous combustion products Oxides of sulfur.

Special protective actions for fire-fighters

Special protective equipment for Firefighters should wear self-contained breathing apparatus and full firefighting turnout

fire-fighters	gear. Use personal protection equipment.
Hazchem code	•2Y

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures

Personal precautions	Evacuate personnel to safe areas. Use personal protective equipment as required. Avoid contact with skin, eyes, and clothing. Ensure adequate ventilation. Keep people away from and upwind of spill/leak. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. All equipment used when handling the product must be grounded. Take precautionary measures against static discharges. Do not touch or walk through spilled material. See section 8 for more information.
Other information	Ventilate the area. Refer to protective measures listed in Sections 7 and 8.
For emergency responders	Use personal protection recommended in Section 8.

Environmental precautions

Environmental precautions	Refer to protective measures listed in Sections 7 and 8. Prevent further leakage or spillage if safe to do so. Prevent product from entering drains.

Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Do not touch or walk through spilled material. Dike far ahead of spill to collect runoff water. Keep out of drains, sewers, ditches and waterways. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Dam up. Soak up with inert absorbent material. Pick up and transfer to properly labelled containers. Take precautionary measures against static discharges. Use non-sparking tools. Never return spill or leaks to original containers for re-use. After cleaning, flush away traces with water.

7. HANDLING AND STORAGE

Precautions for safe handling

Advice on safe handling	Avoid contact with skin, eyes, and clothing. Avoid breathing vapors or mists. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use grounding and bonding connection when transferring this material to prevent static discharge, fire or explosion. Use with local exhaust ventilation. Use spark-proof tools and explosion-proof equipment. Keep in an area equipped with sprinklers. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice. Do not eat, drink or smoke when using this product. Use personal protection equipment.
General hygiene considerations	Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Avoid contact with skin, eyes, and clothing. Wash hands before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection. Do not eat, drink or smoke when using this product.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Protect from direct sunlight. Keep away from heat, sparks, flame and other sources of ignition (i.e., pilot lights, electric motors and static electricity). Keep in properly labelled containers. Keep in an area equipped with sprinklers.

Incompatible materials Strong oxidizing agents.

Poisons Schedule (SUSMP) None allocated

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Control parameters

Exposure Limits No value assigned for this specific material by Safe Work Australia. However, Workplace Exposure Standard(s) for constituent(s):

Ethyl alcohol (Ethanol): 8hr TWA = 1880 mg/m^3 (1000 ppm)

As published by Safe Work Australia Workplace Exposure Standards for Airborne Contaminants.

TWA - The time-weighted average airborne concentration of a particular substance when calculated over an eight-hour working day, for a five-day working week.

These Workplace Exposure Standards are guides to be used in the control of occupational health hazards. All atmospheric contamination should be kept to as low a level as is workable. These workplace exposure standards should not be used as fine dividing lines between safe and dangerous concentrations of chemicals. They are not a measure of relative toxicity.

Appropriate engineering controls

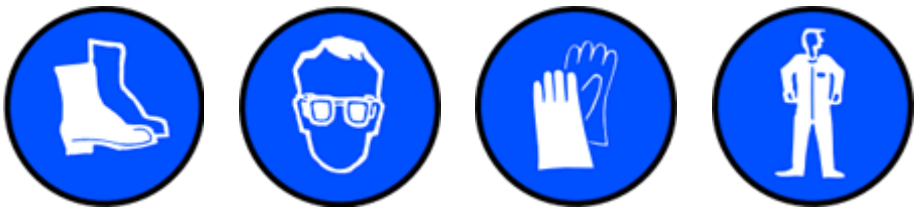
Engineering controls Eyewash stations. Apply technical measures to comply with the occupational exposure limits.

If in the handling and application of this material, safe exposure levels could be exceeded, the use of engineering controls such as local exhaust ventilation must be considered and the results documented. If achieving safe exposure levels does not require engineering controls, then a detailed and documented risk assessment using the relevant Personal Protective Equipment (PPE) (refer to PPE section below) as a basis must be carried out to determine the minimum PPE requirements.

Individual protection measures, such as personal protective equipment

The selection of PPE is dependent on a detailed risk assessment. The risk assessment should consider the work situation, the physical form of the chemical, the handling methods, and environmental factors.

OVERALLS, SAFETY SHOES, CHEMICAL GOGGLES, GLOVES.



Eye/face protection Tight sealing safety goggles.

Skin and body protection Overalls. Antistatic boots. Wear suitable protective clothing.

Hand protection Impervious gloves.

Respiratory protection If determined by a risk assessment an inhalation risk exists, wear an organic vapour respirator meeting the requirements of AS/NZS 1715 and AS/NZS 1716.

Environmental exposure controls No information available.

9. PHYSICAL AND CHEMICAL PROPERTIES

Information on basic physical and chemical properties

Physical state	Liquid
Appearance	Clear
Color	No information available
Odor	No information available
Odor threshold	No information available

Property	**Values**	**Remarks • Method**
pH	7.5-9 (10% in water)	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	-3.89°C	
Boiling point / boiling range	87.78°C	
Flash point	25.6°C	Pensky-Martens Closed Cup (PMCC)
Evaporation rate	No data available	None known
Flammability (solid, gas)	No data available	None known
Flammability Limit in Air		None known
Upper flammability or explosive limits	19%	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	
Vapor density	No data available	
Relative density	1.03 @25°C	
Water solubility	No data available	
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	55 cP @25°C	None known

Other information

Pour Point -1.11°C

10. STABILITY AND REACTIVITY

Reactivity

Reactivity Non-reactive under normal conditions of use, storage and transport.

Chemical stability

Stability Stable under normal conditions.

Explosion data

Sensitivity to mechanical impact None.

Sensitivity to static discharge Yes.

Possibility of hazardous reactions

Possibility of hazardous reactions None under normal processing.

Conditions to avoid

Conditions to avoid Heat, flames and sparks. Static discharge (electrostatic discharge). Direct sunlight.

Incompatible materials

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products Oxides of sulfur.

11. TOXICOLOGICAL INFORMATION

Acute toxicity

Information on likely routes of exposure

Product Information No adverse health effects expected if the chemical is handled in accordance with this Safety Data Sheet and the chemical label. Symptoms or effects that may arise if the chemical is mishandled and overexposure occurs are:

Inhalation May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.

Eye contact Causes serious eye damage.

Skin contact Causes skin irritation.

Ingestion Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Ingestion of larger amounts may cause defects to the central nervous system (e.g. dizziness, headache). May cause central nervous system depression.

Symptoms Irritation/Corrosion. May cause redness and tearing of the eyes. Erythema (skin redness).

Numerical measures of toxicity - Product Information

On basis of test data

Oral LD50 > 2000 mg/kg (rat)
Dermal LD50 2000-5000 mg/kg (rabbit)

Numerical measures of toxicity - Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
Sodium lauryl ether sulphate	= 1600 mg/kg (Rat)	-	-
Ethyl alcohol (Ethanol)	= 7060 mg/kg (Rat)	-	= 124.7 mg/L (Rat) 4h
Alcohols, C12-15, ethoxylated	1650-2000 mg/kg (Rat)	>2000 mg/kg (Rabbit)	-

See section 16 for terms and abbreviations

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

Skin corrosion/irritation Causes skin irritation.

Serious eye damage/eye irritation Causes serious eye damage.

Respiratory or skin sensitization No information available.

Germ cell mutagenicity No information available.

Carcinogenicity This product does not contain any carcinogens or potential carcinogens as listed by OSHA, IARC or NTP.
(OSHA - Occupational Safety and Health Administration)
(IARC - International Agency for Research on Cancer)
(NTP - National Toxicology Program).

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

12. ECOLOGICAL INFORMATION

Ecotoxicity

Ecotoxicity Keep out of waterways. Toxic to aquatic life. Harmful to aquatic life with long lasting effects.
Acute
Algae EC50 Algae > 56 ppm, 72 hours
Crustacea EC50 Daphnia > 13 ppm, 48 hours
Fish LC50 Fish 2.3 mg/l, 96 hours.

Persistence and degradability

Persistence and degradability Readily biodegradable.

Bioaccumulative potential

Bioaccumulation No information available.

Component Information

Chemical name	Partition coefficient
Ethyl alcohol (Ethanol)	-0.32

Mobility

Mobility in soil No information available.

Other adverse effects

13. DISPOSAL CONSIDERATIONS

Waste treatment methods

Waste from residues/unused products Should not be released into the environment. Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.

Contaminated packaging Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld

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

14. TRANSPORT INFORMATION

ADG
Classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for Transport by Road and Rail; DANGEROUS GOODS.

UN number	1170
Proper shipping name	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Hazard class	3
Packing group	III
Hazchem code	•2Y

IATA
Classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; DANGEROUS GOODS.

UN number	1170
UN proper shipping name	ETHANOL SOLUTION
Transport hazard class(es)	3
Packing group	III

IMDG
Classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; DANGEROUS GOODS.

UN number	1170
UN proper shipping name	ETHANOL SOLUTION (ETHYL ALCOHOL SOLUTION)
Transport hazard class(es)	3
Packing group	III
IMDG EMS Fire	F-E
IMDG EMS Spill	S-D
Marine pollutant	No

15. REGULATORY INFORMATION

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

National regulations

Australia
Classified as dangerous goods in accordance with the Australian Code for the Transport of Dangerous Goods by Road and Rail (ADG).

Classified as a hazardous chemical in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).

See section 8 for national exposure control parameters

Poisons Schedule (SUSMP) None allocated

Major hazard (accident/incident planning) regulation
Verify that license requirements are met

Hazardous chemical	Threshold quantity (T)
Liquids that meet the criteria for Class 3 Packing Group II or III	50 000

National pollutant inventory
Subject to reporting requirement

Chemical name	National pollutant inventory
Ethyl alcohol (Ethanol) - 64-17-5	10 tonne/yr Threshold category 1

International Inventories

AIIC All the constituents of this material are listed on the Australian Inventory of Industrial Chemicals.

Legend:
AIIC- Australian Inventory of Industrial Chemicals

International Regulations

The Montreal Protocol on Substances that Deplete the Ozone Layer Not applicable

The Stockholm Convention on Persistent Organic Pollutants Not applicable

The Rotterdam Convention Not applicable

16. OTHER INFORMATION

Supplier Safety Data Sheet 07/ 2018

Reason(s) For Issue: First Issue Primary SDS

Issuing Date: 30-Jan-2023

This Safety Data Sheet has been prepared by Ixom Operations Pty Ltd (Toxicology and SDS Services).

Revision Note:
The symbol (*) in the margin of this SDS indicates that this line has been revised.

Key or legend to abbreviations and acronyms used in the safety data sheet
Legend Section 8: EXPOSURE CONTROLS/PERSONAL PROTECTION

TWA	TWA (time-weighted average)	STEL	STEL (Short Term Exposure Limit)
Ceiling	Maximum limit value	*	Skin designation
C	Carcinogen		

Key literature references and sources for data used to compile the SDS

EPA (Environmental Protection Agency)
Acute Exposure Guideline Level(s) (AEGL(s))
U.S. Environmental Protection Agency Federal Insecticide, Fungicide, and Rodenticide Act
U.S. Environmental Protection Agency High Production Volume Chemicals
Food Research Journal
Hazardous Substance Database
International Uniform Chemical Information Database (IUCLID)
Japan GHS Classification
Australian Industrial Chemicals Introduction Scheme (AICIS)
NIOSH (National Institute for Occupational Safety and Health)
National Library of Medicine's ChemID Plus (NLM CIP)
National Library of Medicine's PubMed database (NLM PUBMED)
National Toxicology Program (NTP)
New Zealand's Chemical Classification and Information Database (CCID)
Organization for Economic Co-operation and Development Environment, Health, and Safety Publications

Organization for Economic Co-operation and Development High Production Volume Chemicals Program
Organization for Economic Co-operation and Development Screening Information Data Set
RTECS (Registry of Toxic Effects of Chemical Substances)
World Health Organization

Disclaimer

This SDS summarises to our best knowledge at the date of issue, the chemical health and safety hazards of the material and general guidance on how to safely handle the material in the workplace. Since Ixom Operations Pty Ltd cannot anticipate or control the conditions under which the product may be used, each user must, prior to usage, assess and control the risks arising from its use of the material.

If clarification or further information is needed, the user should contact their Ixom representative or Ixom Operations Pty Ltd at the contact details on page 1.

Ixom Operations Pty Ltd's responsibility for the material as sold is subject to the terms and conditions of sale, a copy of which is available upon request.

End of Safety Data Sheet