SAFETY DATA SHEET

Revision date: 11-Nov-2024

Revision Number 1

Section 1: Identification

Product identifier

Product Name Marine New G 115 20762

Product Code(s) 000000027829

Other means of identification

Pure substance/mixture Mixture

Recommended use of the chemical and restrictions on use

Recommended use Fragrances.

Uses advised against No information available.

Illicit Drug Precursors/Reagents This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling, and storing these substances.

Details of manufacturer or importer

Supplier
Ixom Operations Pty Ltd (Bronson & Jacobs division) - incorporated in Australia
ABN:51 600 546 512
70 Marple Avenue
Villawood NSW 2163
Australia

Telephone Number: +61 2 8717 2929
Facsimile: +61 2 9755 9611

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.

Section 2: Hazard identification

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS). Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

GHS Classification

Flammable liquids	Category 4
Skin corrosion/irritation	Category 2
Serious eye damage/eye irritation	Category 2
Respiratory sensitization	Category 1B
Chronic aquatic toxicity	Category 3

Label elements
Exclamation mark

Signal word
WARNING

Hazard statements
H227 - Combustible liquid
H315 - Causes skin irritation
H317 - May cause an allergic skin reaction
H319 - Causes serious eye irritation
H412 - Harmful to aquatic life with long lasting effects

Precautionary Statements - Prevention
Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Contaminated work clothing must not be allowed out of the workplace.
Wash hands thoroughly after handling.
Wear protective gloves/clothing and eye/face protection.
Avoid release to the environment.
Precautionary Statements - Response
Specific treatment (see First aid on this label).
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.
IF ON SKIN: Wash with plenty of soap and water.
If skin irritation or rash occurs: Get medical advice/attention.
Take off contaminated clothing and wash it before reuse.
In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet to extinguish..
Precautionary Statements - Storage
Store in a well-ventilated place.
Precautionary Statements - Disposal
Dispose of contents/container to an approved waste disposal plant.

Other hazards which do not result in classification

Section 3: Composition and information on ingredients

Chemical name	CAS No.	Weight-%
1-Butanol, 3-methoxy-3-methyl-	56539-66-3	30-40
7-Octen-2-ol, 2,6-dimethyl-	18479-58-8	10-20
1,8-Cineole	470-82-6	1-5
2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)- (Nerol)	106-25-2	1-5
Ionone, methyl-	1335-46-2	1-5
Dodecanal	112-54-9	0.1-1
Coumarin	91-64-5	0.1-1
Eugenol	97-53-0	0.1-1
Undecanal, 2-methyl-	110-41-8	0.1-1
d-Limonene	5989-27-5	0.1-1
.alpha.-Pinene	80-56-8	0.1-1
2,4-Dimethyl-3-cyclohexenecarboxaldehyde (Triplal)	68039-49-6	0.1-1
Fragrance ingredients present at non-hazardous	-	to 100

concentrations		

Section 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. (Call a physician if symptoms occur).

Eye contact Rinse immediately with plenty of water, also under the eyelids, for at least 15 minutes. 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 skin with soap and water. If skin irritation or rash occurs: Get medical advice/attention.

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.

Most important symptoms and effects, both acute and delayed

Symptoms Irritating. May cause redness and tearing of the eyes. May cause allergic skin reaction. Redness. Rashes. Hives.

Effects of Exposure No information available.

Indication of any immediate medical attention and special treatment needed

Note to physicians May cause sensitization by skin contact. Treat symptomatically.

Section 5: Firefighting measures

Suitable Extinguishing Media

Suitable extinguishing media Dry chemical, CO2, water spray or regular foam.

Specific hazards arising from the chemical

Specific hazards arising from the chemical Combustible liquid. On burning will emit toxic fumes, including those of oxides of carbon. 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 carbon.

Special protective actions for fire-fighters

Special protective equipment and precautions for fire-fighters Firefighters should wear self-contained breathing apparatus and full firefighting turnout gear. Use personal protection equipment.

Section 6: Accidental release measures

Personal precautions, protective equipment and emergency procedures

Personal precautions	Avoid contact with skin, eyes or clothing. Avoid breathing vapors or mists. Ensure adequate ventilation. Do not touch or walk through spilled material. Keep people away from and upwind of spill/leak. Evacuate personnel to safe areas. Wash thoroughly after handling. Use personal protective equipment as required. Remove all sources of ignition.
Other information	Ventilate the area.
For emergency responders	Shut off ignition sources. Clear area of all unprotected personnel. Use personal protection recommended in Section 8.

Environmental precautions

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

Methods and material for containment and cleaning up

Methods for containment	Stop leak if you can do it without risk. Remove ignition sources. Provide adequate ventilation. Dike far ahead of spill to collect runoff water. Do not touch or walk through spilled material. Absorb with earth, sand or other non-combustible material and transfer to containers for later disposal.
Methods for cleaning up	Slippery when spilt. Avoid accidents, clean up immediately. Dam up. Soak up with inert absorbent material. Use personal protective equipment as required. Pick up and transfer to properly labeled containers. Use non-sparking tools.

Section 7: Handling and storage

Precautions for safe handling

Advice on safe handling	Avoid contact with skin and eyes. Avoid breathing vapors or mists. Ensure adequate ventilation. Wash thoroughly after handling. Use personal protection equipment. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Use according to package label instructions. Handle in accordance with good industrial hygiene and safety practice.
General hygiene considerations	Remove and wash contaminated clothing and gloves, including the inside, before re-use. Contaminated work clothing should not be allowed out of the workplace. Regular cleaning of equipment, work area and clothing is recommended. Wash hands and face before breaks and immediately after handling the product. Wear suitable gloves and eye/face protection.

Conditions for safe storage, including any incompatibilities

Storage Conditions	Keep containers tightly closed in a dry, cool and well-ventilated place. Keep away from open flames, hot surfaces and sources of ignition. Keep container closed when not in use. Protect from direct sunlight. Store away from incompatible materials described in Section 10. Store away from incompatible materials (refer to SDS). Classified as a C1 (COMBUSTIBLE LIQUID) for the purpose of storage and handling, in accordance with the requirements of AS 1940. Refer to State Regulations for storage and transport requirements.
Incompatible materials	Strong oxidizing agents.

Section 8: Exposure controls and personal protection

Control parameters

Exposure Limits No value assigned for this specific material by Safe Work Australia.

Chemical name	Australia	New Zealand	ACGIH TLV
.alpha.-Pinene 80-56-8	-	TWA: 5 ppm TWA: 28 mg/m³ STEL: 10 ppm STEL: 56 mg/m³ Sk*	TWA: 20 ppm dermal sensitizer

Chemical name	European Union	United Kingdom	Germany DFG
Eugenol 97-53-0	-	-	skin sensitizer
d-Limonene 5989-27-5	-	-	TWA: 5 ppm TWA: 28 mg/m³ Peak: 20 ppm Peak: 112 mg/m³ Sk* skin sensitizer

Appropriate engineering controls

Engineering controls Ensure adequate ventilation, especially in confined areas.

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, RESPIRATOR.

Eye/face protection Goggles.

Skin and body protection Wear suitable protective clothing. Boots. Overalls.

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.

Thermal hazards No information available.

Section 9: Physical and chemical properties

Information on basic physical and chemical properties

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

Property	**Values**	**Remarks • Method**
pH	No data available	None known
pH (as aqueous solution)	No data available	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	>35°C	None known
Flash point	73 °C	None known
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	No data available	
Lower flammability or explosive limits	No data available	
Vapor pressure	No data available	None known
Vapor density	No data available	None known
Relative density	0.913 - 0.943 @ 20°C	None known
Water solubility	No data available	None known
Solubility(ies)	No data available	None known
Partition coefficient	No data available	None known
Autoignition temperature	No data available	None known
Decomposition temperature	No data available	None known
Kinematic viscosity	No data available	None known
Dynamic viscosity	No data available	None known

Other information

Section 10: Stability and reactivity

Reactivity

Reactivity No information available.

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. Heat, flames and sparks. static discharge (electrostatic discharge). Avoid contact with combustible substances. Direct sunlight.

Incompatible materials

Incompatible materials Strong oxidizing agents.

Hazardous decomposition products

Hazardous decomposition products Oxides of carbon.

Section 11: Toxicological information

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 irritation.

Eye contact Causes serious eye irritation.

Skin contact Causes skin irritation. May cause sensitization by skin contact.

Ingestion May cause gastrointestinal discomfort if consumed in large amounts.

Symptoms Irritating. May cause redness and tearing of the eyes. May cause allergic skin reaction. Redness. Rashes. Hives.

Acute toxicity .

Numerical measures of toxicity - Product Information

ATEmix (oral) 5820 mg/kg (1)
ATEmix (inhalation-vapor) LC50/1hr: 2114.16 mg/l (1)

Component Information

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1-Butanol, 3-methoxy-3-methyl-	-	> 2000 mg/kg (Rat)	-
7-Octen-2-ol, 2,6-dimethyl-	= 3600 mg/kg (Rat)	> 5 g/kg (Rabbit)	-
1,8-Cineole	= 2480 mg/kg (Rat)	-	-
2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)-(Nerol)	= 4500 mg/kg (Rat)	> 5 g/kg (Rabbit)	-
Ionone, methyl-	> 5 g/kg (Rat)	> 5000 mg/kg (Rabbit)	-
Dodecanal	= 23 000 mg/kg (Rat)	> 2000 mg/kg (Rabbit)	-
Coumarin	> 5000 mg/kg (Rat)	= 293 mg/kg (Rat)	-
Eugenol	= 1930 mg/kg (Rat)	-	-
Undecanal, 2-methyl-	> 5 g/kg (Rat)	> 10 mL/kg (Rabbit)	-
d-Limonene	= 5200 mg/kg (Rat) = 4400 mg/kg (Rat)	> 5 g/kg (Rabbit)	-
.alpha.-Pinene	= 3700 mg/kg (Rat)	> 5000 mg/kg (Rat)	-

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. Classification is based on mixture calculation methods based on component data.

Serious eye damage/eye irritation Causes serious eye irritation. Classification is based on mixture calculation methods based on component data.

Respiratory or skin sensitization May cause sensitization by skin contact. Classification is based on mixture calculation methods based on component data.

Germ cell mutagenicity No information available.

Carcinogenicity No information available.

The table below indicates whether each agency has listed any ingredient as a carcinogen.

Chemical name	Australia	European Union	IARC
Coumarin - 91-64-5	-	-	Group 3
Eugenol - 97-53-0	-	-	Group 3
d-Limonene - 5989-27-5	-	-	Group 3

Reproductive toxicity No information available.

STOT - single exposure No information available.

STOT - repeated exposure No information available.

Aspiration hazard No information available.

Section 12: Ecological information

Ecotoxicity

Aquatic ecotoxicity Harmful to aquatic life with long lasting effects. Avoid contaminating waterways. Keep out of waterways.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1-Butanol, 3-methoxy-3-methyl-	-	LC50: >100mg/L (96h, Oryzias latipes)	-	-
1,8-Cineole	-	LC50: 95.4 - 109mg/L (96h, Pimephales promelas)	-	-
2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)- (Nerol)	-	LC50: =20.3mg/L (96h, Danio rerio)	-	-
Ionone, methyl-	-	LC50: =2.3mg/L (96h,	-	-

		Danio rerio)		
Eugenol	-	LC50: =13mg/L (96h, Danio rerio)	-	EC50 = 1.13mg/L (48hr,Daphnia magna)(1)
Undecanal, 2-methyl-	-	LC50: =0.35mg/L (96h, Oncorhynchus mykiss)	-	-
d-Limonene	-	LC50: 0.619 - 0.796mg/L (96h, Pimephales promelas) LC50: =35mg/L (96h, Oncorhynchus mykiss)	-	LC50 Daphnia magna (Water flea) 0.577 mg/L/48 hr (1)
.alpha.-Pinene	-	LC50: =0.28mg/L (96h, Pimephales promelas)	-	LC50: =41mg/L (48h, Daphnia magna)

Terrestrial ecotoxicity There is no data for this product.

Persistence and degradability

Persistence and degradability No information available.

Bioaccumulative potential

Bioaccumulation There is no data for this product.

Component Information

Chemical name	Partition coefficient
1-Butanol, 3-methoxy-3-methyl-	0.18
7-Octen-2-ol, 2,6-dimethyl-	3.25
1,8-Cineole	3.4
2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)- (Nerol)	2.76
Ionone, methyl-	5
Dodecanal	4.9
Eugenol	3.098
Undecanal, 2-methyl-	4.9
d-Limonene	4.23
.alpha.-Pinene	4.1

Mobility

Mobility No information available.

Other adverse effects

Other adverse effects No information available.

Section 13: Disposal considerations

Waste treatment methods

Waste from residues/unused products Should not be released into the environment.

Contaminated packaging Dispose of in accordance with federal, state and local regulations. Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

See section 8 for more information

Section 14: Transport information

ADG Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.

IATA Not classified as Dangerous Goods by the criteria of the International Air Transport Association (IATA) Dangerous Goods Regulations for transport by air; NON-DANGEROUS GOODS.

IMDG Not classified as Dangerous Goods by the criteria of the International Maritime Dangerous Goods Code (IMDG Code) for transport by sea; NON-DANGEROUS GOODS.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code
No information available

Section 15: Regulatory information

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

National regulations

Australia

Classified as a hazardous substance in accordance with the criteria of Safe Work Australia - Globally Harmonized System (GHS).
Not classified as Dangerous Goods by the criteria of the Australian Dangerous Goods Code (ADG Code) for transport by Road and Rail; NON-DANGEROUS GOODS.
See section 8 for national exposure control parameters

Standard for Uniform Scheduling of Medicines and Poisons (SUSMP)
No poisons schedule number allocated
Poison Schedule Number Not applicable

Australian Industrial Chemicals Introduction Scheme (AICIS)

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
1-Butanol, 3-methoxy-3-methyl- - 56539-66-3	Present	-
7-Octen-2-ol, 2,6-dimethyl- - 18479-58-8	Present	-
1,8-Cineole - 470-82-6	Present	-
2,6-Octadien-1-ol, 3,7-dimethyl-, (Z)- (Nerol) - 106-25-2	Present	-
Ionone, methyl- - 1335-46-2	Present	-
Dodecanal - 112-54-9	Present	-
Coumarin - 91-64-5	Present	-
Eugenol - 97-53-0	Present	-
Undecanal, 2-methyl- - 110-41-8	Present	-
d-Limonene - 5989-27-5	Present	Specific information requirement: Obligations to provide information apply. You must tell us within 28 days if the circumstances of your importation or manufacture (introduction) are different to those in our assessment.
.alpha.-Pinene - 80-56-8	Present	-

Chemical name	Australian Industrial Chemicals Introduction Scheme (AICIS)	Additional information
2,4-Dimethyl-3-cyclohexenecarboxaldehyde (Triplal) - 68039-49-6	Present	-
Fragrance ingredients present at non-hazardous concentrations - -	Present	-

Illicit Drug Precursors/Reagents
This product contains one or more substance(s) on the Illicit Drug Precursors/Reagents list. Verify requirements related to using, handling, and storing these substances.

Chemical name	Illicit Drug Precursors/Reagents
Eugenol - 97-53-0	Category 2

National pollutant inventory
Subject to reporting requirement

Chemical name	National pollutant inventory
1-Butanol, 3-methoxy-3-methyl- - 56539-66-3	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total
d-Limonene - 5989-27-5	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total
.alpha.-Pinene - 80-56-8	20 MW Threshold category 2b total 60000 MWH Threshold category 2b total 1 tonne/h Threshold category 2a total 25 tonne/yr Threshold category 1a total 400 tonne/yr Threshold category 2a total 2000 tonne/yr Threshold category 2b total

International Inventories

AIIC	Contact supplier for inventory compliance status.
NZIoC	Contact supplier for inventory compliance status.
TSCA	Contact supplier for inventory compliance status.
DSL/NDSL	Contact supplier for inventory compliance status.
EINECS/ELINCS	Contact supplier for inventory compliance status.
ENCS	Contact supplier for inventory compliance status.
IECSC	Contact supplier for inventory compliance status.
KECL	Contact supplier for inventory compliance status.
PICCS	Contact supplier for inventory compliance status.

Legend:
AIIC AIIC- Australian Inventory of Industrial Chemicals
NZIoC - New Zealand Inventory of Chemicals
TSCA - United States Toxic Substances Control Act Section 8(b) Inventory
DSL/NDSL - Canadian Domestic Substances List/Non-Domestic Substances List

EINECS/ELINCS - European Inventory of Existing Chemical Substances/European List of Notified Chemical Substances
ENCS - Japan Existing and New Chemical Substances
IECSC - China Inventory of Existing Chemical Substances
KECL - Korean Existing and Evaluated Chemical Substances
PICCS - Philippines Inventory of Chemicals and Chemical Substances

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

Section 16: Other information

(1) Supplier Safety Data Sheet 08/ 2023

Reason(s) For Issue:	First Issue Primary SDS
Prepared By	This Safety Data Sheet has been prepared by IXOM Operations Pty Ltd (Toxicology and SDS Services).
Revision date:	11-Nov-2024

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
SVHC: Substances of Very High Concern for Authorization:
PBT: Persistent, Bioaccumulative, and Toxic (PBT) Substances
vPvB: Very Persistent and very Bioaccumulative (vPvB) Substances
STOT: Specific Target Organ Toxicity
ATE: Acute Toxicity Estimate
LC50: 50% Lethal Concentration
LD50: 50% Lethal Dose

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
Agency for Toxic Substances and Disease Registry (ATSDR)
U.S. Environmental Protection Agency ChemView Database
European Food Safety Authority (EFSA)
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)
National Institute of Technology and Evaluation (NITE)
Australia National Industrial Chemicals Notification and Assessment Scheme (NICNAS)

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)
U.S. 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
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 Bronson & Jacobs 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.

Bronson and Jacobs incorporating the businesses of Woods and Woods and Keith Harris and Australian Botanical Products.

End of Safety Data Sheet