

# SAFETY DATA SHEET



Revision date: 27-Aug-2020

Revision Number 3

## 1. IDENTIFICATION OF THE MATERIAL AND SUPPLIER

### Product identifier

**Product Name** DSF 108  
**Product Code(s)** 000000014383

### Other means of identification

**UN number** 1987

### Recommended use of the chemical and restrictions on use

**Recommended use** Frother. Industrial applications.  
**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).

<b>Flammable liquids</b>	Category 3
<b>Aspiration hazard</b>	Category 1
<b>Acute toxicity - Oral</b>	Category 4
<b>Acute toxicity - Inhalation (Vapors)</b>	Category 4
<b>Skin corrosion/irritation</b>	Category 2
<b>Serious eye damage/eye irritation</b>	Category 2A
<b>Specific target organ toxicity (single exposure)</b>	Category 3

### **SIGNAL WORD**

Danger

**Label elements**

Flame  
Health hazard  
Exclamation mark

**Hazard statements**

H226 - Flammable liquid and vapor  
H302 - Harmful if swallowed  
H304 - May be fatal if swallowed and enters airways  
H315 - Causes skin irritation  
H319 - Causes serious eye irritation  
H332 - Harmful if inhaled  
H335 - May cause respiratory irritation

**Precautionary Statements - Prevention**

Wash hands thoroughly after handling  
Avoid breathing dust / fume / gas / mist / vapours / spray  
Do not eat, drink or smoke when using this product  
Use only outdoors or in a well-ventilated area  
Wear protective gloves / protective clothing / eye protection / face protection  
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 explosion-proof electrical, ventilating, lighting equipment  
Use only non-sparking tools  
Take precautionary measures against static discharge  
Avoid release to the environment

**Precautionary Statements - Response**

Specific treatment (see First aid on this SDS)  
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 ON SKIN (or hair): Remove/Take off immediately all contaminated clothing. Rinse skin with water/shower  
Take off contaminated clothing and wash before reuse  
If skin irritation occurs: Get medical advice/attention  
IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing  
Call a POISON CENTER or doctor/physician if you feel unwell  
IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell  
Rinse mouth  
Do NOT induce vomiting  
In case of fire: Use extinguishing media as outlined in Section 5 of this Safety Data Sheet for extinction.

**Precautionary Statements - Storage**

Store in a well-ventilated place. Keep container tightly closed  
Store in a well-ventilated place. Keep cool  
Store locked up

**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**

AUH066 - Repeated exposure may cause skin dryness or cracking

**Poisons Schedule (SUSMP)** None allocated

**3. COMPOSITION/INFORMATION ON INGREDIENTS****Substance**

Not applicable

**Mixture**

Contains &lt;10% C10-C13 n-Paraffin.

Chemical name	CAS No.	Weight-%
Hexanol	25917-35-5	30-70%
1-Hexanol	111-27-3	10-<30%
Pentanol	30899-19-5	1-<30%
Cyclohexanol	108-93-0	<10%
Other component(s)	-	to 100%

**4. FIRST AID MEASURES****Description of first aid measures**

<b>General advice</b>	For advice, contact a Poisons Information Centre (e.g. phone Australia 13 11 26; New Zealand 0800 764 766) or a doctor.
<b>Emergency telephone number</b>	Poisons Information Center, Australia: 13 11 26 Poisons Information Center, New Zealand: 0800 764 766
<b>Inhalation</b>	Remove to fresh air. If breathing is difficult, (trained personnel should) give oxygen. If breathing has stopped, give artificial respiration. Get medical attention immediately.
<b>Eye contact</b>	IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing. Get medical attention if symptoms occur.
<b>Skin contact</b>	Wash off immediately with soap and plenty of water. Call a physician if symptoms occur.
<b>Ingestion</b>	Clean mouth with water. Do not induce vomiting without medical advice. Never give anything by mouth to an unconscious person. Get immediate medical advice/attention.

**Most important symptoms and effects, both acute and delayed**

Symptoms Irritation.

**Indication of any immediate medical attention and special treatment needed**

Note to physicians Treat symptomatically. Delayed pulmonary edema may occur.

**5. FIRE FIGHTING MEASURES****Suitable Extinguishing Media**

Suitable Extinguishing Media Alcohol resistant foam is the preferred firefighting medium but, if it is not available, normal protein foam can be used.

Unsuitable extinguishing media No information available.

**Specific hazards arising from the chemical**

**Specific hazards arising from the chemical** Flammable. Most vapors are heavier than air. Vapors may spread along ground and collect in low or confined areas (sewers, basements, tanks). Flash back possible over considerable distance.

**Hazardous combustion products** Carbon oxides.

**Special protective actions for fire-fighters**

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

**Hazchem code** •3Y

## **6. ACCIDENTAL RELEASE MEASURES**

**Personal precautions, protective equipment and emergency procedures**

**Personal precautions** Avoid contact with skin and eyes. Avoid breathing vapors or mists. Evacuate personnel to safe areas. ELIMINATE all ignition sources (no smoking, flares, sparks or flames in immediate area). Pay attention to flashback. Take precautionary measures against static discharges. Use personal protective equipment as required.

**For emergency responders** Use personal protection recommended in Section 8.

**Environmental precautions**

**Environmental precautions** See Section 12 for additional Ecological Information.

**Methods and material for containment and cleaning up**

**Methods for containment** Keep out of drains, sewers, ditches and waterways. Stop leak if you can do it without risk.

**Methods for cleaning up** Use a non-combustible material like vermiculite, sand or earth to soak up the product and place into a container for later disposal. Use non-sparking tools.

## **7. HANDLING AND STORAGE**

**Precautions for safe handling**

**Advice on safe handling** Avoid contact with skin, eyes, and clothing. Do not eat, drink or smoke when using this product. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. Ground and bond all lines and equipment associated with product system. All equipment should be non-sparking and explosion proof. Take precautionary measures against static discharges.

**Conditions for safe storage, including any incompatibilities**

**Storage Conditions** Keep containers tightly closed in a dry, cool and well-ventilated place. Store away from sources of heat or ignition. Keep container closed when not in use.

**Incompatible materials** Oxidizing agents. Reducing 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):

Cyclohexanol: 8hr TWA = 206 mg/m<sup>3</sup> (50 ppm), Sk

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.

`Sk' (skin) Notice - absorption through the skin may be a significant source of exposure. The exposure standard is invalidated if such contact should occur.

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** 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, RESPIRATOR.



**Eye/face protection**

Goggles.

**Skin and body protection**

Boots. Wear suitable protective clothing. Overalls.

**Hand protection**

Impervious gloves.

**Respiratory protection**

If determined by a risk assessment an inhalation risk exists, wear an organic vapour/particulate 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	No information available.
Color	No information available.
Odor	Alcohol
Odor threshold	No information available.

<u>Property</u>	<u>Values</u>	<u>Remarks • Method</u>
pH	Not applicable	None known
Melting point / freezing point	No data available	None known
Boiling point / boiling range	150.8 - 229.2°C	None known
Flash point	57°C	CC (closed cup)
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	10% (V)	
Lower flammability or explosive limits	1.2% (V)	
Vapor pressure	2.23 hPa @20°C	None known
Vapor density	No data available	None known
Relative density	No data available	None known
Water solubility	Partially miscible	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	5.58 mPa.s @20°C	None known

**Other information****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 None.

**Possibility of hazardous reactions**

Possibility of hazardous reactions None under normal processing.

**Conditions to avoid**

Conditions to avoid Heat, flames and sparks.

**Incompatible materials**

**Incompatible materials** Oxidizing agents. Reducing agents.

**Hazardous decomposition products**

**Hazardous decomposition products** Carbon oxides.

**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:

<b>Inhalation</b>	Irritating to respiratory system. May cause central nervous system depression with nausea, headache, dizziness, vomiting, and incoordination.
<b>Eye contact</b>	Causes serious eye irritation.
<b>Skin contact</b>	Causes skin irritation. Repeated exposure may cause skin dryness or cracking.
<b>Ingestion</b>	Ingestion may cause gastrointestinal irritation, nausea, vomiting and diarrhoea. Aspiration may cause pulmonary edema and pneumonitis.

**Symptoms** Irritation. Vapors may cause drowsiness and dizziness.

**Numerical measures of toxicity - Product Information**

No information available.

**Numerical measures of toxicity - Component Information**

Chemical name	Oral LD50	Dermal LD50	Inhalation LC50
1-Hexanol	= 3210 mg/kg ( Rat ) = 720 mg/kg ( Rat )	1500 - 2000 mg/kg ( Rabbit )	> 21 mg/L ( Rat ) 1 h
Pentanol	= 2200 mg/kg ( Rat )	= 2000 mg/kg ( Rabbit )	-
Cyclohexanol	= 2.06 g/kg ( Rat ) = 1400 mg/kg ( Rat )	501 - 794 mg/kg ( Rabbit )	> 3.63 mg/L ( Rat ) 4 h

See section 16 for terms and abbreviations

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

<b>Skin corrosion/irritation</b>	Irritating to skin. Classification is based on mixture calculation methods based on component data.
<b>Serious eye damage/eye irritation</b>	Causes serious eye irritation. Classification is based on mixture calculation methods based on component data.
<b>Respiratory or skin sensitization</b>	No information available.
<b>Germ cell mutagenicity</b>	No information available.
<b>Carcinogenicity</b>	No information available.

<b>Reproductive toxicity</b>	No information available.
<b>STOT - single exposure</b>	May cause respiratory irritation.
<b>STOT - repeated exposure</b>	No information available.
<b>Aspiration hazard</b>	May be fatal if swallowed and enters airways.

## 12. ECOLOGICAL INFORMATION

### Ecotoxicity

**Ecotoxicity** Keep out of waterways.

Chemical name	Algae/aquatic plants	Fish	Toxicity to microorganisms	Crustacea
1-Hexanol	-	LC50: 89.7 - 106mg/L (96h, Pimephales promelas) LC50: =144mg/L (96h, Brachydanio rerio)	-	EC50: =201mg/L (24h, Daphnia magna)
Pentanol	EC50: =493mg/L (72h, Desmodesmus subspicatus) EC50: =181mg/L (96h, Desmodesmus subspicatus)	LC50: =472mg/L (96h, Pimephales promelas) LC50: =530mg/L (96h, Brachydanio rerio) LC50: =650mg/L (96h, Lepomis macrochirus) LC50: =400mg/L (96h, Oncorhynchus mykiss)	-	EC50: =260mg/L (48h, Daphnia magna) EC50: 607 - 841mg/L (48h, Daphnia magna)
Cyclohexanol	EC50: =29.2mg/L (72h, Desmodesmus subspicatus) EC50: =29mg/L (96h, Desmodesmus subspicatus)	LC50: =704mg/L (96h, Pimephales promelas) LC50: =1033mg/L (96h, Pimephales promelas) LC50: =1100mg/L (96h, Lepomis macrochirus)	-	EC50: >500mg/L (24h, Daphnia magna Straus) EC50: =578mg/L (24h, Daphnia magna)

### Persistence and degradability

**Persistence and degradability** No information available.

### Bioaccumulative potential

**Bioaccumulation** No information available.

### Component Information

Chemical name	Partition coefficient
1-Hexanol	2.03
Pentanol	1.16
Cyclohexanol	1.25

### Mobility

**Mobility in soil** No information available.

### Other adverse effects



**13. DISPOSAL CONSIDERATIONS****Waste treatment methods**

<b>Waste from residues/unused products</b>	Dispose of in accordance with local regulations. Dispose of waste in accordance with environmental legislation.
<b>Contaminated packaging</b>	Empty containers pose a potential fire and explosion hazard. Do not cut, puncture or weld containers.

**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.

<b>UN number</b>	1987
<b>Proper shipping name</b>	ALCOHOLS, N.O.S. (CONTAINS HEXANOLS AND PENTANOLS)
<b>Hazard class</b>	3
<b>Packing group</b>	III
<b>Hazchem code</b>	•3Y

**IATA**

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

<b>UN number</b>	1987
<b>UN proper shipping name</b>	ALCOHOLS, N.O.S. (CONTAINS HEXANOLS AND PENTANOLS)
<b>Transport hazard class(es)</b>	3
<b>Packing group</b>	III

**IMDG**

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

<b>UN number</b>	1987
<b>UN proper shipping name</b>	ALCOHOLS, N.O.S. (CONTAINS HEXANOLS AND PENTANOLS)
<b>Transport hazard class(es)</b>	3
<b>Packing group</b>	III
<b>IMDG EMS Fire</b>	F-E
<b>IMDG EMS Spill</b>	S-D

**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  
Hazardous chemical  
 Liquids that meet the criteria for Class 3 Packing Group II or III

Threshold quantity (T)  
50 000

**National pollutant inventory**  
 Subject to reporting requirement

Chemical name	National pollutant inventory
1-Hexanol - 111-27-3	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
Cyclohexanol - 108-93-0	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**

**AICS** All the constituents of this material are listed on the Australian Inventory of Chemical Substances.

**Legend:**

**AICS** - Australian Inventory of 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

**16. OTHER INFORMATION**

Supplier Safety Data Sheet 06/ 2020

**Reason(s) For Issue:** 5 Yearly Revised Primary SDS  
 Change in Hazardous Chemical Classification

**Issuing Date:** 27-Aug-2020

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**

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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**

**The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text. 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**