SAFETY DATA SHEET

1. IDENTIFICATION OF THE SUBSTANCE / MIXTURE AND OF THE COMPANY / UNDERTAKING

This product is made in Japan by AGC Inc.

AGC Inc. Document Reference Number:	X-0106CLP-06
Product Name	ASAHIKLIN™ AC-2000
Address / Phone No.	AGC Chemicals Europe, Ltd. Hillhouse International Thornton Cleveleys Lancs FY5 4QD [redacted] E-Mail: [redacted]@agcce.com
Emergency Phone No.	[redacted]
Use	Solvent

2. HAZARDS IDENTIFICATION

Low acute toxicity.

2.1 Classification of the substance or mixture

Regulation (EC) No. 1272/2008 (CLP) & UK CLP	Not classified

3. COMPOSITION / INFORMATION ON INGREDIENTS

Regulation (EC) No. 1272/2008 (CLP)

Ingredient(s)	%(w/w)	CAS No.	EC No.	Hazard symbol(s) and hazard statement(s)
1,1,1,2,2,3,3,4,4,5,5,6,6-Tridecafluorohexane	>99.9	355-37-3	206-581-9	Not classified

4. FIRST AID MEASURES

Description of first aid measures

Inhalation	Remove patient from exposure, keep warm and at rest. Oxygen may be beneficial if breathing is laboured. Obtain medical attention.
Skin Contact	Remove contaminated clothing immediately and wash affected skin with plenty of water or soap and water. If symptoms persist, obtain medical attention. Contaminated clothing should be thoroughly cleaned before re-use.
Eye Contact	Immediately irrigate with eyewash solution or clean water, holding the eyelids apart, for at least 15 minutes. Obtain medical attention.
Ingestion	Do not induce vomiting. Provided the patient is conscious, wash out mouth with water and give 200-300 ml (half a pint) of water to drink. Obtain medical attention.

Further Medical Treatment	Symptomatic treatment and supportive therapy as indicated.

5. FIREFIGHTING MEASURES

General	Non-flammable.
Special hazards arising from the substance or mixture	Thermal decomposition will evolve very toxic and corrosive vapours. (hydrogen fluoride and possibly carbonyl fluoride)
Extinguishing media	As appropriate for surrounding fire. Keep fire exposed containers cool by spraying with water.
Advice for firefighters	A self contained breathing apparatus and full protective clothing must be worn in fire conditions. Wear neoprene gloves when handling refuse from a fire involving this product, to protect against possible contamination with hydrofluoric acid.

6. ACCIDENTAL RELEASE MEASURES

Personal precautions, protective equipment and emergency procedures	Ensure suitable personal protection during the removal of spillages, for example: goggles, respiratory protection against organic vapours, rubber boots, gloves and apron. Ventilate area.
Environmental precautions	Do not allow spillages to enter drains, sewers, or watercourses.
Methods and material for containment and cleaning up	Adsorb spillages onto sand, earth or any suitable adsorbent material. Transfer to a container for disposal. Wash the spillage area with water. Washings must be prevented from entering surface water drains.
Reference to other sections	8, 13

7. HANDLING AND STORAGE

Precautions for safe handling	Avoid contact with skin and eyes. Atmospheric concentrations should be minimised and kept as low as reasonably practicable below the occupational exposure limit. Provide adequate ventilation, including appropriate local extraction, if fumes or vapours are likely to be evolved. Avoid contact with naked flames and hot surfaces as corrosive and very toxic decomposition products can be formed.
Conditions for safe storage, including any incompatibilities	Keep container tightly closed and dry. Keep in a cool, well ventilated place.
Specific use	Solvent

8. EXPOSURE CONTROLS / PERSONAL PROTECTION

Appropriate engineering controls	Atmospheric concentrations should be minimised and kept as low as reasonably practicable. Provide adequate ventilation, including appropriate local extraction, if fumes or vapours are likely to be evolved.
Personal protection equipment	Wear suitable gloves and eye/face protection. Contaminated clothing should be thoroughly cleaned before re-use. Wear suitable respiratory protective equipment if exposure to levels above the occupational exposure limit is likely.
	Respirators Where engineering controls are not fitted or inadequate wear suitable respiratory protective equipment. Where a cartridge/canister respirator is suitable use: Type A. Check with protective equipment manufacturer's data.

Eye Protection
Wear protective eyewear (goggles, face shield, or safety glasses).

Gloves
Impervious gloves (EN 374).

Occupational Exposure Limits

No Occupational Exposure Limit Assigned

9. PHYSICAL AND CHEMICAL PROPERTIES

Form	liquid
Colour.	colourless
Odour	Ether-like.
Solubility (Water)	1.5 mg/l @ 20°C
Partition Coefficient (n-Octanol/water)	log Pow = 4.1 @ 35°C
Boiling Point (° C)	67
Melting Point (° C)	<-80
Vapour pressure (Pascal)	150000 @ 20°C
Specific Gravity	1.68 @ 20°C
Kinematic Viscosity	0.51 mm2/s @ 20°C; 0.39 mm2/s @ 40°C
Flash Point (°C) [Closed cup]	Non-flammable.
Auto Ignition Point (°C)	590°C
Additional properties	Surface tension = 73.2 mN/m @ 20°C

10. STABILITY AND REACTIVITY

Chemical stability	Stable under normal conditions.
Possibility of hazardous reactions	May react violently with oxidising agents, alkali metals, alkali earth metals.
Conditions to avoid	Heat and direct sunlight.
Incompatible materials	oxidising agents, akali metals, alkali earth metals, acids and alkalis
Hazardous Decomposition Product(s)	Thermal decomposition will evolve very toxic and corrosive vapours. (hydrogen fluoride and possibly carbonyl fluoride)

11. TOXICOLOGICAL INFORMATION

Acute toxicity / Ingestion	Low acute toxicity. LD50 (mouse). >5000 mg/kg
Acute toxicity / Inhalation	Low acute toxicity. LC50 (rat) >11,100 ppm (145.3 mg/l)
Acute toxicity / Skin Contact	No information available.
Skin corrosion/irritation	Non-irritant (OECD 439)
Serious eye damage/irritation	Non-irritant (OECD 437)
Respiratory irritation	No information available.
Sensitisation	It is not a skin sensitiser. (OECD 429 LLNA)
Repeated dose toxicity	In a 28-day repeated dose oral study in the rat, males administered 1000mg/kg b.w./day showed increased liver weights. The NOEL in this study was 200 mg/kg b.w./day.

Mutagenicity	Negative in in-vitro mutagenicity tests.
Carcinogenicity	No information available
Reproductive toxicity	No adverse reproductive or developmental effects were observed in rats administered 1000 mg/kg/day by the oral route.
Specific target organ toxicity — single exposure	Not classified
Specific target organ toxicity — repeated exposure	Not classified
Aspiration hazard	Not applicable

12. ECOLOGICAL INFORMATION

Environmental Fate and Distribution	Liquid with high volatility.
Toxicity	LC50 (48 hr) (Fish) (Oryzias latipes) > 125 mg/l EC50 (48 hr) (Daphnia magna) > 1.1 mg/l EC50 (72 hr) (Algae) (Psuedokirchneriella subcapita) > 0.098 mg/l
Effect on Effluent Treatment	Activated sludge respiration inhibition test: EC 50 (3hr) > 1000 mg/l
Bioaccumulative potential	Bioconcentration factor (BCF) : 293 - 658 in carp
Mobility in soil	The product has low mobility in soil. log Koc = 3.7.
Results of PBT and vPvB assessment	Not classified as PBT or vPvB.

13. DISPOSAL CONSIDERATIONS

Regulatory information	Disposal should be in accordance with local, state or national legislation. Waste code : 14 06 03
Waste treatment methods	Incinerate under approved controlled conditions, using incinerators suitable for the disposal of noxious chemical waste. Decontaminate empty containers before recycling.

14. TRANSPORT INFORMATION

Not classified as dangerous for transport.

15. REGULATORY INFORMATION

European Regulations

Special Restrictions:	None known
Chemical Safety Assessment	A Chemical Safety Assessment has been completed for this substance.

16. OTHER INFORMATION

This data sheet was prepared in accordance with Regulation (EC) No. 1907/2006 & UK REACH.

The following sections contain revisions or new statements: 1,11,15

This product is not designed for special applications such as pharmaceutical or medical use.
For other technical information, contact the address in Section 1.
Information in this publication is believed to be accurate and is given in good faith, but it is for the Customer to satisfy itself of the suitability for its own particular purpose. Accordingly, AGC Chemicals Europe, Ltd. gives no warranty as to the fitness of the Product for any particular purpose and any implied warranty or condition (statutory or otherwise) is excluded except to the extent that such exclusion is prevented by law. Freedom under Patent, Copyright and Designs cannot be assumed.
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GLOSSARY

UK REACH: The REACH etc. (Amendment etc.) (EU Exit) Regulations 2020
UK CLP: Retained CLP Regulation (EU) No. 1272/2008 as amended for Great Britain
WEL: Workplace Exposure Limit (UK HSE EH40)
COM: The company aims to control exposure in its workplace to this limit
TLV: The company aims to control exposure in its workplace to the ACGIH limit
TLV-C: The company aims to control exposure in its workplace to the ACGIH Ceiling limit
MAK: The company aims to control exposure in its workplace to the German limit
Sk: Can be absorbed through skin
Sen: Capable of causing respiratory sensitisation
Bmgv: Biological monitoring guidance value (UK HSE EH40)