SAFETY DATA SHEET

1. Identification of Product

Product Identifier

Product Name: **(2,2,2-Trifluoroethyl)hydrazine (70% in Water)**
Product Code: XS10131
CAS Number: 5042-30-8
MFCD Number: MFCD00007622

Relevant Identified Uses of Substance or Mixture and Uses Advised Against

Research and Development use

Supplier Details of the Safety Data Sheet

Atlantic Research Chemicals Ltd, Unit A, Stratton View Business Park, Holsworthy Road,, Bude, Cornwall EX23 9NR
Telephone: +44 (0)870 7746454 Fax: +44 (0)870 7746455 E-mail: info@atlantic-chemicals.com

2. Hazards Identification

Classification of the Substance or Mixture

Skin corrosion (category 1b)
Serious eye damage (category 1)
STOT single exposure (category 3)
Sensitisation, skin (category 1)
Sensitisation, respiratory (category 1)

Label Elements



Signal Word: Danger

Hazard Statements

H314 – Causes severe skin burns and eye damage.
H317 – May cause an allergic reaction.
H318 – Causes serious eye damage.
H334 – May cause allergy or asthma symptoms or breathing difficulties if inhaled.
H335 – May cause respiratory irritation.

Precautionary Statements

P260 – Do not breathe dust/fumes/gas/mist/vapours/spray.
P280 – Wear protective gloves/protective clothing/eye protection/face protection.
P301 + P312 – IF SWALLOWED: Call a POISON CENTER or doctor/physician if you feel unwell.
P302 + P352 – IF ON SKIN: Wash with plenty of soap and water.
P304 + P340 – IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing.
P305 + P351 + P338 – IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do, continue rinsing.

Other Hazards

No information available.

3. Composition/Information on Ingredients

Substances

(2,2,2-Trifluoroethyl)hydrazine (70% in Water)
CAS number: 5042-30-8

Mixtures

Concentration	Product Name	CAS number:	EC/EINECS:

4. First Aid Measures

Description of First Aid Measures

Skin Contact IF ON SKIN: Wash with plenty of soap and water. Get medical advice/attention.
Eye Contact Get medical advice/attention. IF IN EYES: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do so. Continue rinsing.
Ingestion IF SWALLOWED: Immediately call a POISON CENTRE or doctor/physician. Do NOT induce vomiting. Never give anything by mouth to an unconscious person. Rinse mouth with water.
Inhalation IF INHALED: Remove victim to fresh air and keep at rest in a position comfortable for breathing. Get medical advice/attention.

Most Important Symptoms and Effects

Material is extremely destructive to tissue of the mucous membranes and upper respiratory tract, eyes, and skin; cough; shortness of breath; headache; nausea. Sensitisation possible by inhalation and skin contact. Treat symptomatically and supportively.

Indication of any Immediate Medical Attention

No additional measures required.

5. Fire Fighting Measures

Extinguishing Media

Suitable Carbon dioxide.
Dry chemical powder or foam.
Sand.
Water spray.

Unsuitable Water jet.

Special Hazards Arising from the Substance or mixture

In combustion emits carbon oxides and nitrogen oxides.

Advice for Fire Fighters

Wear self contained breathing apparatus.
Wear protective clothing to prevent contact with skin and eyes.

6. Accidental Released Measures

Personal Precautions

Do not attempt to take action without suitable protective clothing – see section 8 of SDS.
Evacuate the area immediately.

Environmental Precautions

Do not discharge into drains or rivers.
Contain the spillage using bunds.

Methods & Materials

Mix with sand or vermiculite.
Transfer to a closable, labelled salvage container for disposal by an appropriate method.

7. Handling and Storage

Personal Precautions

Safe Handling Ensure there is sufficient ventilation of the area.
Protection against Do not eat, drink or smoke when using this product.
explosions and fires Remove/take off immediately all contaminated clothing.
Take off contaminated clothing and wash before reuse.
Wash hands thoroughly after handling.

Conditions for Safe Storage, Including any Incompatibilities

Managing storage risks Store in a cool, well ventilated area.
Keep container tightly closed.
Containers which are opened must be carefully resealed and kept upright to prevent leakage.

Storage controls Do not store in conditions of high (or highly fluctuating) temperature.
Store away from oxidising agents.
Do not store with acids.
Do not expose to direct light or UV light.
Keep refrigerated.
Protect from heat.

Maintaining integrity Keep container tightly closed.
Air and moisture sensitive – store under an inert atmosphere.
Hygroscopic – keep dry.

Other advice Store in a well ventilated place.

Specific End Uses

The end use(s) have not been fully determined. The substance is supplied for Research and Development purposes by professionals only.

8. Exposure Controls/Personal Protection

Control Parameters

Contains no substances with occupational exposure limit values.

Exposure Controls

General protective and hygiene measures Wear protective gloves/protective clothing/eye protection/face protection.
Wash hands during breaks and at the end of handling the material.
Immediately remove any contaminated clothing.

Engineering measures Use only outdoors or in a well ventilated area.
Eye/face protection Safety glasses with side shields.
Hand protection Protective gloves.
Respiratory protection Do not breathe dust/fumes/gas/vapours/spray.

	Use breathing protection with high concentration.
Skin protection	Handle with gloves. Dispose of contaminated gloves after use in accordance with applicable laws and good laboratory practice. Wash and dry hands. Protective clothing.
Other personal protection advice	Avoid all handling.

9. Physical and Chemical Properties

Physical and Chemical Properties

Molecular formula:	C2 H5 F3 N2
Molecular weight:	114.066
Information on basic physical and chemical properties	
a) Appearance:	Liquid
b) Odour:	No data.
c) Odour threshold:	No data.
d) pH:	No data.
e) Melting point/freezing point:	No data.
f) Initial boiling point and boiling range:	No data.
g) Flash point:	No data.
h) Evaporation rate:	No data.
i) Flammability (solid, gas):	No data.
j) Upper/lower flammability or explosive limits:	No data.
k) Vapour pressure:	No data.
l) Vapour density:	No data.
m) Relative density:	No data.
n) Water solubility:	No data.
o) Partition coefficient: n-octanol/ water:	No data.
p) Auto-ignition temperature:	No data.
q) Decomposition temperature:	No data.
r) Viscosity:	No data.
s) Explosive properties:	No data.
t) Oxidizing properties:	No data.

Other Information

No additional information.

10. Stability and Reactivity

Reactivity

No unusual reactivity.

Stability

Stable under normal conditions.

Possibility of Hazardous Reactions

Reacts with strong oxidising agents.

Conditions to avoid

Do not expose material to any source of ignition.

Avoid moist atmosphere.

Incompatible Materials

Oxidising agents.

Strong acids.

Air.

Water/moisture.

Heat.

Hazardous Decomposition Products

In combustion emits carbon oxides and nitrogen oxides.

11. Toxicology Information

Information

Acute toxicity:	Swallowing will lead to a strong caustic effect on the mouth and throat and to the danger of perforation of the stomach and oesophagus.
Skin corrosion/irritation:	Causes burns.
Serious eye damage:	Causes serious eye damage.
Respiratory or skin sensitisation:	Sensitisation possible by inhalation and skin contact.
Germ cell mutagenicity:	Not known.
Carcinogenicity:	IARC: No component of this product present at levels greater than or equal to 0.1% is identified as probable, possible or confirmed human carcinogen by IARC.

Reproductive toxicity: Not known.
Aspiration hazard: Not known.
Additional
To the best of our knowledge the acute and chronic toxicity of this substance is not fully known. No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.

12. Ecological Information

Toxicity
Not known.
Persistence and Degradability
Not known.
Bio-Accumulative Potential
Not known.
Mobility in Soil
Not known.
Results of PBT & PvB Assessment
Not known.
Other Adverse Effects
Water hazard class 1 (self-assessment): slightly hazardous for water. Do not allow product to reach ground water, water bodies or sewage system, even in small quantities.

13. Exposure Controls/Personal Protection

Waste Treatment Methods

Disposal operations	Offer surplus and non-recyclable solutions to a licensed disposal company. Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
Disposal of packaging	Disposal must be made according to official regulations.

14. Transport Information

Air (ICAO)

1. UN Number:	UN1993
2. UN Proper shipping name:	Flammable liquid, n.o.s
3. Transport hazard class(es):	3
4. Packing group:	III
5. Environmental hazards:	No.
6. Special precautions for user:	For the purposes of documentation and package marking, the Proper Shipping Name shall be supplemented with the technical name (see 3.1.2.8.1) Warning: corrosive substances. Kemler number: 80 Segregation group: alkalis.
7. Transport in bulk:	

Road (ADR)

1. UN Number:	UN1993
2. UN Proper shipping name:	Flammable liquid, n.o.s
3. Transport hazard class(es):	3
4. Packing group:	III
5. Environmental hazards:	No.
6. Special precautions for user:	For the purposes of documentation and package marking, the Proper Shipping Name shall be supplemented with the technical name (see 3.1.2.8.1) Warning: corrosive substances. Kemler number: 80 Segregation group: alkalis.
7. Transport in bulk:	
8. Sea (IMDG)	
1. UN Number:	UN1993
2. UN Proper shipping name:	Flammable liquid, n.o.s
3. Transport hazard class(es):	3
4. Packing group:	III
5. Environmental hazards:	Marine pollutant: no.
6. Special precautions for user:	For the purposes of documentation and package marking, the Proper Shipping Name shall be supplemented with the technical name (see 3.1.2.8.1) Warning: corrosive substances. Kemler number: 80

Segregation group: alkalis.

7. Transport in bulk:

15. Safety, Health and Environmental Regulations

Safety, Heath and Environmental Regulations:
Product is not subject to any additional regulations.
Safety Assessment
No chemical Safety Assessment

16. Other Information

ADR: Accord Europeen sur le transport des merchandises Dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Reglement International concernant le transport des merchandises dangereuses par chemin de fer (Regulations concerning the International transport of Dangerous Goods by Rail)
IMDG: International Maritime Code for Dangerous Goods
IATA: International Air Transport Association
IATA-DGR: Dangerous Goods Regulations by the International Air Transport Association
ICAO: International Civil Aviation Organisation
ICAO-TI: Technical Instructions by the ICAO
GHS: Globally Harmonized System of Classification and Labelling of Chemicals
CAS: Chemical Abstracts Service
Associated Risk Phrases According to European Directives 67/548/EEC

R34	Causes burns

Disclaimer
The product is listed for research and development purposes only and not for human or animal use. As such, in most cases, the toxicological, ecological and physicochemical properties have not been fully determined and the product should be treated with respect and always handled under suitable conditions by appropriately qualified personnel. The responsible party shall use this datasheet only in conjunction with other sources of information gathered by them, and should make an independent judgement of suitability, to ensure proper use and protect the health and safety of employees. This information is furnished without warranty and any use of the product not in conformance with this safety data sheet, or in combination with any other product or process is the responsibility of the user.

Certified by Dan Pooley