Hanus solution

35097-1L

Version 2.4 Revision Date 06.11.2025 Supersedes 1

SECTION 1: Identification of the substance/mixture and of the company/undertaking

1.1. Product identifier

Product name	:	Hanus solution
SDS-number	:	000000020957
Type of product	:	Mixture
Remarks	:	SDS according to Art. 31 of Regulation (EC) 1907/2006.

1.2. Relevant identified uses of the substance or mixture and uses advised against

Use of the Substance/Mixture	:	Laboratory chemicals
Uses advised against	:	none

1.3. Details of the supplier of the safety data sheet

Company	:	Honeywell Specialty Chemicals Seelze GmbH Wunstorfer Straße 40 30926 Seelze Germany	Solstice Advanced Materials US, Inc. 115 Tabor Road Morris Plains, NJ 07950-2546 USA
Telephone	:	(49) 5137-999 0	
For further information, please contact:	:	SafetyDataSheet@solstice.com	

1.4. Emergency telephone number

Emergency telephone number	:	+1-703-527-3887 (ChemTrec-Transport) +1 303-739-1378 (Medical)
	:	Poison Control Center: United Kingdom: (+44) 844 892 0111

SECTION 2: Hazards identification

2.1. Classification of the substance or mixture

REGULATION (EC) No 1272/2008

Flammable liquids Category 3
H226 Flammable liquid and vapour.
Skin corrosion Category 1A
H314 Causes severe skin burns and eye damage.

2.2. Label elements

REGULATION (EC) No 1272/2008

Hazard pictograms :



Signal word : Danger

Hazard statements	:	H226 Flammable liquid and vapour. H314 Causes severe skin burns and eye damage.
Precautionary statements	:	P210 Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking. P260 Do not breathe dust/ fume/ gas/ mist/ vapours/ spray. P280 Wear protective gloves/protective clothing/eye protection/face protection. P284 Wear respiratory protection. P301 + P330 + P331 IF SWALLOWED: Rinse mouth. Do NOT induce vomiting. P302 + P352 IF ON SKIN: Wash with plenty of water. P304 + P340 IF INHALED: Remove person to fresh air and keep 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. P308 + P313 IF exposed or concerned: Get medical advice/ attention.
Hazardous components which must be listed on the label	:	Acetic acid

2.3. Other hazards

This product is a mixture. Health hazard information is based on its components.

SECTION 3: Composition/information on ingredients

3.1. Substances

Not applicable

3.2. Mixtures

Chemical name	CAS-No. Index-No. EC-No.	Classification 1272/2008	Concentration	Remarks
Acetic acid	64-19-7 607-002-00-6 200-580-7	Flam. Liq. 3; H226 Skin Corr. 1A; H314	>= 90 % - <= 100 %	Eye Irrit. 2; H319:10 - < 25 % Skin Irrit. 2; H315:10 - < 25 % Skin Corr. 1B; H314:25 - < 90 % Skin Corr. 1A; H314:>= 90 % Eye Irrit. 2; H319:10 - < 25 % Skin Corr. 1B; H314:25 - < 90 % Skin Corr. 1A; H314:>= 90 % Skin Irrit. 2; H315:10 - < 25 %
Iodine bromide	7789-33-5 232-159-9	Skin Corr. 1B; H314 Eye Dam. 1; H318 STOT SE 3; H335; Respiratory system	>= 1 % - <= 5 %	

Remaining components of this product are non-hazardous and/or are present at concentrations below reportable limits.

Occupational Exposure Limit(s), if available, are listed in Section 8.
For the full text of the H-Statements mentioned in this Section, see Section 16.

SECTION 4: First aid measures

4.1 Description of first aid measures

General advice:
First aider needs to protect himself. Move out of dangerous area. Take off all contaminated clothing immediately.

Inhalation:
If breathed in, move person into fresh air. If symptoms persist, call a physician.

Skin contact:
After contact with skin, wash immediately with plenty of water. Call a physician immediately.

Eye contact:
Rinse thoroughly with plenty of water, also under the eyelids. Protect unharmed eye. Call a physician immediately.

Ingestion:
Do NOT induce vomiting. If victim is fully conscious, give a cupful of water. Call a physician immediately.

4.2. Most important symptoms and effects, both acute and delayed

No data available

4.3. Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

See Section 11 for more detailed information on health effects and symptoms. :

SECTION 5: Firefighting measures

5.1. Extinguishing media

Suitable extinguishing media:
Water spray
Foam
Carbon dioxide (CO2)
Dry powder

Extinguishing media which shall not be used for safety reasons:
High volume water jet

5.2. Special hazards arising from the substance or mixture

Flammable.
Vapours may form explosive mixtures with air.
Vapours are heavier than air and may spread along floors.
Vapors may travel to areas away from work site before igniting/flashing back to vapor source.
In case of fire hazardous decomposition products may be produced such as:
Carbon oxides
Hydrogen bromide
Hydrogen iodide (HI)

5.3. Advice for firefighters

In the event of fire, wear self-contained breathing apparatus.
Do not use a solid water stream as it may scatter and spread fire.In the event of fire, cool tanks with water spray.Use extinguishing measures that are appropriate to local circumstances and the surrounding environment.

SECTION 6: Accidental release measures

6.1. Personal precautions, protective equipment and emergency procedures

Wear personal protective equipment. Unprotected persons must be kept away. Immediately evacuate personnel to safe areas. Ensure adequate ventilation. Do not breathe vapours or spray mist. Do not get in eyes, on skin, or on clothing.

6.2. Environmental precautions

Prevent further leakage or spillage if safe to do so. Discharge into the environment must be avoided. Do not flush into surface water or sanitary sewer system.

6.3. Methods and materials for containment and cleaning up

Soak up with inert absorbent material.
Pick for disposal in tightly closed containers

6.4. Reference to other sections

For personal protection see section 8.

SECTION 7: Handling and storage

7.1. Precautions for safe handling

Advice on safe handling:
Exhaust ventilation at the object is necessary. Use only acid resistant equipment. Wear personal protective equipment. Avoid inhalation, ingestion and contact with skin and eyes.

Advice on protection against fire and explosion:
Keep away from fire, sparks and heated surfaces. Take precautionary measures against static discharges. No sparking tools should be used.

Hygiene measures:
Remove and wash contaminated clothing before re-use. Keep working clothes separately. Wash hands before breaks and immediately after handling the product. When using, do not eat, drink or smoke.

7.2. Conditions for safe storage, including any incompatibilities

Further information on storage conditions:
Keep container tightly closed in a dry and well-ventilated place. Keep away from heat and sources of ignition. Keep away from direct sunlight.

7.3. Specific end use(s)

no additional data available

SECTION 8: Exposure controls/personal protection

8.1. Control parameters

Occupational exposure limits:

Components	Basis / Value type	Value / Form of exposure	Exceeding Factor	Remarks
Acetic acid	EH40 WEL STEL	50 mg/m3 20 ppm	15 minutes	
Acetic acid	EH40 WEL TWA	25 mg/m3 10 ppm		
Acetic acid	EU ELV TWA	25 mg/m3 10 ppm		Indicative
Acetic acid	EU ELV STEL	50 mg/m3 20 ppm		Indicative

EH40 WEL - UK. EH40 Workplace Exposure Limits (WELs), as amended
STEL - Short term exposure limit
EH40 WEL - UK. EH40 Workplace Exposure Limits (WELs), as amended
TWA - Time weighted average

DNEL/ PNEC-Values

Component	End-use/impact	Exposure duration	Value	Exposure routes	Remarks
Acetic acid	Workers / Long-term local effects		25 mg/m3	Inhalation	
Acetic acid	Workers / Acute local effects		25 mg/m3	Inhalation	
Acetic acid	Consumers / Long-term local effects		25 mg/m3	Inhalation	
Acetic acid	Consumers / Acute local effects		25 mg/m3	Inhalation	

Component	Environmental compartment / Value	Remarks
Acetic acid	Fresh water: 3,06 mg/l	Assessment factor: 100
Acetic acid	Marine water: 0,3 mg/l	Assessment factor: 1000
Acetic acid	Sewage treatment plant: 85 mg/l	Assessment factor: 10
Acetic acid	Fresh water sediment: 11,36 mg/kg dw	
Acetic acid	Marine sediment: 1,1 mg/kg dw	
Acetic acid	Soil: 0,47 mg/kg dw	

8.2. Exposure controls

Occupational exposure controls

The Personal Protective Equipment must be in accordance with EN standards:respirator EN 136, 140, 149; safety glasses EN 166; protective suit: EN 340, 463, 468, 943-1, 943-2; gloves EN 374, 511; safety shoes EN-ISO 20345.
Avoid contact with skin and eyes.
Do not breathe vapours or spray mist.

Engineering measures
Use with local exhaust ventilation.

Personal protective equipment
Respiratory protection:
In the case of vapour formation use a respirator with an approved filter.

Hand protection:
Glove material: butyl-rubber
Break through time: > 480 min
Glove thickness: 0,7 mm
Butoject® 898
Gloves must be inspected prior to use.
Replace when worn.

Remarks:Supplementary note: The specifications are based on information and tests from similar substances by analogy.
Due to varying conditions (e.g.temperature or other strains) it must be considered that the usage of a chemical protective glove in practice may be much shorter than the permeation time determined in accordance with EN 374.
Since actual conditions of practical use often deviate from standardised conditions according EN 374 the glove manufacturer reccomends to use the chemical protective glove in practice not longer than 50% of the recomended permeation time.
Manufacturer´s directions for use should be observed because of great diversity of types .
Suitable gloves tested according EN 374 are supplied e.g. from KCL GmbH, D-36124 Eichenzell, Vertrieb@kcl.de

Eye protection:
Safety goggles

Skin and body protection:
acid-proof protective clothing

Environmental exposure controls

Handle in accordance with local environmental regulations and good industrial practices.

SECTION 9: Physical and chemical properties

9.1. Information on basic physical and chemical properties

(a) Physical state	:	liquid
(b) Colour	:	red brown
(c) Odour	:	No data available
(d) Melting point/freezing point	:	No data available
(e) Boiling point/boiling range	:	No data available
(f) Flammability	:	No data available
(g) Lower and upper explosion limit	:	Lower explosion limit 4 %(V)

	:	Upper explosion limit 17 %(V)
(h) Flash point	:	40 °C Method: closed cup
(i) Auto-ignition temperature	:	No data available
(j) Decomposition temperature	:	No decomposition if used as directed.
(k) pH	:	No data available
(l) Viscosity, kinematic	:	No data available
(m) Solubility(ies)	:	Water solubility: completely miscible
(o) Vapour pressure	:	No data available
(p) Density and / or relative density	:	1,06 g/cm3
(q) Relative vapour density	:	No data available
(r) Particle characteristics	:	No data available

9.2 Other Information

Polymer characteristics	:	No data available
Oxidizing properties	:	The substance or mixture is not classified as oxidizing.
Evaporation rate	:	No data available
Viscosity, dynamic	:	No data available

SECTION 10: Stability and reactivity

10.1. Reactivity

Stable under normal conditions.

10.2. Chemical stability

No decomposition if used as directed.

10.3. Possibility of hazardous reactions

Hazardous polymerisation does not occur.

10.4. Conditions to avoid

Heat, flames and sparks.
Keep away from direct sunlight.
Protect from atmospheric moisture and water.

10.5. Incompatible materials

Bases
Oxidizing agents
Reducing agents
Metals
Alkali metals
Amines
Alcohols

10.6. Hazardous decomposition products

In case of fire hazardous decomposition products may be produced such as:
Carbon oxides
Hydrogen bromide
Hydrogen iodide (HI)

SECTION 11: Toxicological information

11.1. Information on hazard classes as defined in Regulation (EC) No 1272/2008

(a) Acute toxicity

Acute oral toxicity:
No data available

Acute dermal toxicity:
No data available

Acute inhalation toxicity:
No data available

Acute toxicity (other routes of administration):
No data available

(b) Skin corrosion/irritation:
No data available

(c) Serious eye damage/eye irritation:
No data available

(d) Respiratory or skin sensitisation:
No data available

(e) Germ cell mutagenicity:
Note: No data available

(f) Carcinogenicity:
Note: No data available

(g) Reproductive toxicity:
Remarks: No data available

(h) STOT-single exposure:
No data available

(i) STOT - repeated exposure:
No data available

(j) Aspiration hazard:
No data available

11.2. Information on other hazards

Endocrine disrupting properties
No data available

Other information:
No data available

SECTION 12: Ecological information

12.1. Toxicity

Toxicity to fish:
No data available

Toxicity to aquatic plants:
No data available

Toxicity to aquatic invertebrates:
No data available

Chronic toxicity to aquatic invertebrates:
No data available

12.2. Persistence and degradability

No data available

12.3. Bioaccumulative potential

No data available

12.4. Mobility in soil

No data available

12.5. Results of PBT and vPvB assessment

No data available

12.6. Endocrine disrupting properties

No data available

12.7. Other adverse effects

No data available

SECTION 13: Disposal considerations

13.1. Waste treatment methods

Product:
Dispose according to legal requirements.

Packaging:
Legal requirements are to be considered in regard of reuse or disposal of used packaging materials

Further information:
Provisions relating to waste:
EC Directive 2006/12/EC; 2008/98/EEC
Regulation No. 1013/2006
For personal protection see section 8.

SECTION 14: Transport information

14.1 UN number or ID number
ADR/RID:2789 IMDG:2789 IATA:2789

14.2 UN proper shipping name
ADR/RID:ACETIC ACID SOLUTION
IMDG:ACETIC ACID SOLUTION
IATA:Acetic acid solution

14.3 Transport hazard class(es)
ADR/RID:8 (3) IMDG: 8 (3) IATA: 8 (3)

14.4 Packaging group
ADR/RID:II IMDG: II IATA: II

14.5 Environmental hazards
ADR/RID:no Marine pollutant: no

14.6 Special precautions for user
IMDG Code segregation group (SGG1) – ACIDS,

14.7 Maritime transport in bulk according to IMO instruments

No data available

SECTION 15: Regulatory information

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

Basis	Value	Remarks
Directive 2012/18/EC Revision: P5c:	**Quantity**: 5.000.000 kg **Quantity**: 50.000.000 kg	
Substances of very high concern (SVHC)		This product does not contain substances of very high concern according to Regulation (EC) No Article 57 above the respective regulatory 1907/2006 (REACH), concentration limit of ≥ 0.1 % (w/w).

Other inventory information

USA. List of Active Substances on the Toxic Substances Control Act (TSCA) Chemical Substances Inventory, as amended
On TSCA Inventory

Australia. Inventory of Industrial Chemicals (AIIC), as amended
On the inventory, or in compliance with the inventory

Canada. Domestic Substances List (DSL), as amended
This product contains one or several components listed in the Canadian NDSL.

Japan. Kashin-Hou Law List
On the inventory, or in compliance with the inventory

Korea. Existing Chemicals Inventory (KECI)
On the inventory, or in compliance with the inventory

Philippines. Inventory of Chemicals and Chemical Substances (PICCS)
On the inventory, or in compliance with the inventory

China. Inventory of Existing Chemical Substances (IECSC)
On the inventory, or in compliance with the inventory

New Zealand. Inventory of Chemicals (NZIoC), as published by ERMA New Zealand
On the inventory, or in compliance with the inventory

Taiwan Chemical Substance Inventory (TCSI)
On the inventory, or in compliance with the inventory

15.2 Chemical safety assessment

A Chemical Safety Assessment has not been carried out.

SECTION 16: Other information

Text of H-statements referred to under heading 3

Acetic acid	:	H226	Flammable liquid and vapour.
		H314	Causes severe skin burns and eye damage.
Iodine bromide	:	H314	Causes severe skin burns and eye damage.
		H318	Causes serious eye damage.
		H335	May cause respiratory irritation.

Further information

All directives and regulations refer to amended versions.
Vertical lines in the left hand margin indicate a relevant amendment from the previous version.

Abbreviations:
EC European Community
CAS Chemical Abstracts Service
DNEL Derived no effect level
PNEC Predicted no effect level
vPvB Very persistent and very biaccumulative substance
PBT Persistent, bioaccmulative und toxic substance

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