

Safety Data Sheet
acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

1 Identification

- **Product identifier**
- **Trade name: HFU ACTIVATOR**
- **Article number: HFU**
- **Details of the supplier of the safety data sheet**
- **Manufacturer/Supplier:**
GenTec is a product of Lusid Technologies Inc.
4725 S Camp Kearns Road
Kearns, UT 84118
(801) 966-5300
info@lusidtechnologies.com
- **Information department: Product safety department**
- **Emergency telephone number:**
24 Hrs Emergency Contact:
INFOTRAC
1-800-535-5053

2 Hazard(s) identification

- **Classification of the substance or mixture**



GHS02 Flame

Flammable Liquids 3 H226 Flammable liquid and vapor.



GHS08 Health hazard

Sensitization - Respiratory 1 H334 May cause allergy or asthma symptoms or breathing difficulties if inhaled.



GHS07

Acute Toxicity - Inhalation 4 H332 Harmful if inhaled.
Skin Irritation 2 H315 Causes skin irritation.
Eye Irritation 2A H319 Causes serious eye irritation.
Sensitization - Skin 1 H317 May cause an allergic skin reaction.
Aquatic Chronic 3 H412 Harmful to aquatic life with long lasting effects.

- **Label elements**
- **GHS label elements**
The product is classified and labeled according to the Globally Harmonized System (GHS).

(Contd. on page 2)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: HFU ACTIVATOR

(Contd. of page 1)

- **Hazard pictograms**



GHS02 GHS07 GHS08

- **Signal word** Danger

- **Hazard-determining components of labeling:**

xylene
 poly(hexamethylene diisocyanate)
 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate
 heptan-2-one

- **Hazard statements**

Flammable liquid and vapor.
 Harmful if inhaled.
 Causes skin irritation.
 Causes serious eye irritation.
 May cause allergy or asthma symptoms or breathing difficulties if inhaled.
 May cause an allergic skin reaction.
 Harmful to aquatic life with long lasting effects.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - 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 breathing dust/fume/gas/mist/vapors/spray
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Avoid release to the environment.
 Wear protective gloves/protective clothing/eye protection/face protection.
 [In case of inadequate ventilation] wear respiratory protection.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Call a poison center/doctor if you feel unwell.
 Specific treatment (see on this label).
 Take off contaminated clothing and wash it before reuse.
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 If experiencing respiratory symptoms: Call a poison center/doctor.
 Wash contaminated clothing before reuse.
 In case of fire: Use CO₂, powder or water spray to extinguish.
 Store in a well-ventilated place. Keep cool.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Classification system:**

- **NFPA ratings (scale 0 - 4)**



Health = 2
 Fire = 3
 Reactivity = 0

(Contd. on page 3)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: HFU ACTIVATOR

(Contd. of page 2)

- **HMIS-ratings (scale 0 - 4)**

HEALTH	2	Health = *2
FIRE	3	Fire = 3
REACTIVITY	0	Reactivity = 0

- **Other hazards**
- **Results of PBT and vPvB assessment**
- **PBT:** Not applicable.
- **vPvB:** Not applicable.

3 Composition/information on ingredients

- **Chemical characterization: Mixtures**
- **Description:** Mixture of the substances listed below with nonhazardous additions.

- **Dangerous components:**

28182-81-2	poly(hexamethylene diisocyanate)	25-50%
1330-20-7	xylene	25-50%
4098-71-9	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	2.5-10%
110-43-0	heptan-2-one	2.5-10%
123-86-4	n-butyl acetate	2.5-10%

4 First-aid measures

- **Description of first aid measures**
- **General information:**
Immediately remove any clothing soiled by the product.
Symptoms of poisoning may even occur after several hours; therefore medical observation for at least 48 hours after the accident.
- **After inhalation:**
Supply fresh air and to be sure call for a doctor.
In case of unconsciousness place patient stably in side position for transportation.
- **After skin contact:** Immediately wash with water and soap and rinse thoroughly.
- **After eye contact:**
Rinse opened eye for several minutes under running water. If symptoms persist, consult a doctor.
- **After swallowing:** If symptoms persist consult doctor.
- **Information for doctor:**
- **Most important symptoms and effects, both acute and delayed**
No further relevant information available.
- **Indication of any immediate medical attention and special treatment needed**
No further relevant information available.

5 Fire-fighting measures

- **Extinguishing media**
- **Suitable extinguishing agents:**
CO₂, extinguishing powder or water spray. Fight larger fires with water spray or alcohol resistant foam.
- **For safety reasons unsuitable extinguishing agents:** Water with full jet
- **Special hazards arising from the substance or mixture** No further relevant information available.

(Contd. on page 4)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: **HFU ACTIVATOR**

(Contd. of page 3)

- **Advice for firefighters**
- **Protective equipment:** Mouth respiratory protective device.

6 Accidental release measures

- **Personal precautions, protective equipment and emergency procedures**
Wear protective equipment. Keep unprotected persons away.
- **Environmental precautions:**
Do not allow product to reach sewage system or any water course.
Inform respective authorities in case of seepage into water course or sewage system.
Do not allow to enter sewers/ surface or ground water.
- **Methods and material for containment and cleaning up:**
Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).
Dispose contaminated material as waste according to section 13.
Ensure adequate ventilation.
- **Reference to other sections**
See Section 7 for information on safe handling.
See Section 8 for information on personal protection equipment.
See Section 13 for disposal information.
- **Protective Action Criteria for Chemicals**

- **PAC-1:**

28182-81-2	poly(hexamethylene diisocyanate)	7.8 mg/m ³
1330-20-7	xylene	130 ppm
4098-71-9	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	0.02 ppm
110-43-0	heptan-2-one	150 ppm
123-86-4	n-butyl acetate	5 ppm

- **PAC-2:**

28182-81-2	poly(hexamethylene diisocyanate)	2.9 mg/m ³
1330-20-7	xylene	920* ppm
4098-71-9	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	1.2 mg/m ³
110-43-0	heptan-2-one	670 ppm
123-86-4	n-butyl acetate	200 ppm

- **PAC-3:**

28182-81-2	poly(hexamethylene diisocyanate)	17 mg/m ³
1330-20-7	xylene	2500* ppm
4098-71-9	3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate	5.4 mg/m ³
110-43-0	heptan-2-one	4000* ppm
123-86-4	n-butyl acetate	3000* ppm

7 Handling and storage

- **Handling:**
- **Precautions for safe handling**
Ensure good ventilation/exhaustion at the workplace.
Prevent formation of aerosols.
- **Information about protection against explosions and fires:**
Keep ignition sources away - Do not smoke.
Protect against electrostatic charges.

(Contd. on page 5)

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: HFU ACTIVATOR

(Contd. of page 4)

- **Conditions for safe storage, including any incompatibilities**
- **Storage:**
- **Requirements to be met by storerooms and receptacles:** No special requirements.
- **Information about storage in one common storage facility:** Not required.
- **Further information about storage conditions:** Keep receptacle tightly sealed.
- **Specific end use(s)** No further relevant information available.

8 Exposure controls/personal protection

- **Additional information about design of technical systems:** No further data; see section 7.
- **Control parameters**
- **Components with limit values that require monitoring at the workplace:**
The following constituents are the only constituents of the product which have a PEL, TLV or other recommended exposure limit.
At this time, the remaining constituent has no known exposure limits.

1330-20-7 xylene

PEL	Long-term value: 435 mg/m ³ , 100 ppm
REL	Short-term value: 655 mg/m ³ , 150 ppm Long-term value: 435 mg/m ³ , 100 ppm
TLV	Long-term value: 20 ppm BEI, A4

4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

REL	Short-term value: 0.18 mg/m ³ , 0.02 ppm Long-term value: 0.045 mg/m ³ , 0.005 ppm Skin
TLV	Long-term value: 0.005 ppm

110-43-0 heptan-2-one

PEL	Long-term value: 465 mg/m ³ , 100 ppm
REL	Long-term value: 465 mg/m ³ , 100 ppm
TLV	Long-term value: 50 ppm

123-86-4 n-butyl acetate

PEL	Long-term value: 710 mg/m ³ , 150 ppm
REL	Short-term value: 950 mg/m ³ , 200 ppm Long-term value: 710 mg/m ³ , 150 ppm
TLV	Short-term value: 150 ppm Long-term value: 50 ppm

- **Ingredients with biological limit values:**

1330-20-7 xylene

BEI	1.5 g/g creatinine Medium: urine Time: end of shift Parameter: Methylhippuric acids
-----	--

- **Additional information:** The lists that were valid during the creation were used as basis.
- **Exposure controls**
- **Personal protective equipment:**
- **General protective and hygienic measures:**
Keep away from foodstuffs, beverages and feed.

(Contd. on page 6)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: HFU ACTIVATOR

(Contd. of page 5)

Immediately remove all soiled and contaminated clothing.

Wash hands before breaks and at the end of work.

Avoid contact with the eyes and skin.

· **Breathing equipment:**

In case of brief exposure or low pollution use respiratory filter device. In case of intensive or longer exposure use respiratory protective device that is independent of circulating air.

· **Protection of hands:**



Protective gloves

The glove material has to be impermeable and resistant to the product/ the substance/ the preparation. Due to missing tests no recommendation to the glove material can be given for the product/ the preparation/ the chemical mixture.

Selection of the glove material on consideration of the penetration times, rates of diffusion and the degradation

· **Material of gloves**

The selection of the suitable gloves does not only depend on the material, but also on further marks of quality and varies from manufacturer to manufacturer. As the product is a preparation of several substances, the resistance of the glove material can not be calculated in advance and has therefore to be checked prior to the application.

· **Penetration time of glove material**

The exact break through time has to be found out by the manufacturer of the protective gloves and has to be observed.

· **Eye protection:**



Tightly sealed goggles

9 Physical and chemical properties

· **Information on basic physical and chemical properties**

· **General Information**

· **Appearance:**

· Form:	Liquid
· Color:	Clear
· Odor:	Characteristic
· Odor threshold:	Not determined.

· **pH-value:** Not determined (pH N/A in solvent coatings)

· **Change in condition**

· Melting point/Melting range:	Undetermined.
· Boiling point/Boiling range:	124 °C (255.2 °F)

· **Flash point:** 27 °C (80.6 °F)

· **Flammability:** Flammable.

· **Auto igniting:** 430 °C (806 °F)

· **Decomposition temperature:** Not determined.

(Contd. on page 7)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: HFU ACTIVATOR

(Contd. of page 6)

· Ignition temperature:	Product is not selfigniting.
· Danger of explosion:	Product is not explosive. However, formation of explosive air/vapor mixtures are possible.
· Explosion limits:	
Lower:	1.1 Vol %
Upper:	7 Vol %
· Vapor pressure at 20 °C (68 °F):	6.7 hPa (5 mm Hg)
· Density at 20 °C (68 °F):	0.9907 g/cm ³ (8.2674 lbs/gal)
· Relative density	Not determined.
· Vapor density	Not determined.
· Evaporation rate	Not determined.
· Solubility in / Miscibility with Water:	Not miscible or difficult to mix.
· Partition coefficient (n-octanol/water):	Not determined.
· Viscosity:	
Dynamic:	Not determined.
Kinematic:	Not determined.
· Solvent content:	
Organic solvents:	44.2 %
VOC content:	44.17 %
	491.3 g/l / 4.10 lb/gal
Solids content:	50.4 %
· Other information	No further relevant information available.

10 Stability and reactivity

- **Reactivity** No further relevant information available.
- **Chemical stability**
- **Thermal decomposition / conditions to be avoided:**
No decomposition if used according to specifications.
- **Possibility of hazardous reactions** No dangerous reactions known.
- **Conditions to avoid** No further relevant information available.
- **Incompatible materials:** No further relevant information available.
- **Hazardous decomposition products:** No dangerous decomposition products known.

11 Toxicological information

- **Information on toxicological effects**
- **Acute toxicity:**
- **Primary irritant effect:**
- **on the skin:** Irritant to skin and mucous membranes.
- **on the eye:** Irritating effect.
- **Sensitization:**
Sensitization possible through inhalation.
Sensitization possible through skin contact.

(Contd. on page 8)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: HFU ACTIVATOR

(Contd. of page 7)

- **Additional toxicological information:**

The product shows the following dangers according to internally approved calculation methods for preparations:

Harmful
Irritant

- **Carcinogenic categories**

- **IARC (International Agency for Research on Cancer)**

1330-20-7	xylene	3
-----------	--------	---

- **NTP (National Toxicology Program)**

None of the ingredients is listed.

- **OSHA-Ca (Occupational Safety & Health Administration)**

None of the ingredients is listed.

12 Ecological information

- **Toxicity**

- **Aquatic toxicity:** No further relevant information available.

- **Persistence and degradability** No further relevant information available.

- **Behavior in environmental systems:**

- **Bioaccumulative potential** No further relevant information available.

- **Mobility in soil** No further relevant information available.

- **Ecotoxicological effects:**

- **Remark:** Harmful to fish

- **Additional ecological information:**

- **General notes:**

Water hazard class 2 (Self-assessment): hazardous for water

Do not allow product to reach ground water, water course or sewage system.

Danger to drinking water if even small quantities leak into the ground.

Harmful to aquatic organisms

- **Results of PBT and vPvB assessment**

- **PBT:** Not applicable.

- **vPvB:** Not applicable.

- **Other adverse effects** No further relevant information available.

13 Disposal considerations

- **Waste treatment methods**

- **Recommendation:**

Must not be disposed of together with household garbage. Do not allow product to reach sewage system.

- **Uncleaned packagings:**

- **Recommendation:** Disposal must be made according to official regulations.

14 Transport information

- **UN-Number**

- **DOT, IMDG, IATA**

UN1263

(Contd. on page 9)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: HFU ACTIVATOR

(Contd. of page 8)

- UN proper shipping name
- DOT
- IMDG, IATA

Paint
PAINT

- Transport hazard class(es)
- DOT



- Class
 - Label
- 3 Flammable liquids
3

- IMDG, IATA



- Class
 - Label
- 3 Flammable liquids
3

- Packing group
- DOT, IMDG, IATA

III

- Environmental hazards:
- Marine pollutant:

No

- Special precautions for user
 - Hazard identification number (Kemler code):
 - EMS Number:
 - Stowage Category
- Warning: Flammable liquids
30
F-E, S-E
A

- Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code

Not applicable.

- Transport/Additional information:

- DOT
 - Quantity limitations
- On passenger aircraft/rail: 60 L
On cargo aircraft only: 220 L

- IMDG
- Limited quantities (LQ)
- Excepted quantities (EQ)

5L
Code: E1
Maximum net quantity per inner packaging: 30 ml
Maximum net quantity per outer packaging: 1000 ml

- UN "Model Regulation":

UN 1263 PAINT, 3, III

15 Regulatory information

- Safety, health and environmental regulations/legislation specific for the substance or mixture
- No further relevant information available.

(Contd. on page 10)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: HFU ACTIVATOR

(Contd. of page 9)

· Sara

· **Section 355 (extremely hazardous substances):**

4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

· **Section 313 (Specific toxic chemical listings):**

1330-20-7 xylene

4098-71-9 3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

· **TSCA (Toxic Substances Control Act):**

All components have the value ACTIVE.

· **Hazardous Air Pollutants**

1330-20-7 xylene

· **Proposition 65**· **Chemicals known to cause cancer:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for females:**

None of the ingredients is listed.

· **Chemicals known to cause reproductive toxicity for males:**

None of the ingredients is listed.

· **Chemicals known to cause developmental toxicity:**

None of the ingredients is listed.

· **Carcinogenic categories**· **EPA (Environmental Protection Agency)**

1330-20-7 xylene

I

· **TLV (Threshold Limit Value)**

1330-20-7 xylene

A4

· **NIOSH-Ca (National Institute for Occupational Safety and Health)**

None of the ingredients is listed.

· **GHS label elements**

The product is classified and labeled according to the Globally Harmonized System (GHS).

· **Hazard pictograms**

GHS02 GHS07 GHS08

· **Signal word** Danger· **Hazard-determining components of labeling:**

xylene

poly(hexamethylene diisocyanate)

3-isocyanatomethyl-3,5,5-trimethylcyclohexyl isocyanate

heptan-2-one

· **Hazard statements**

Flammable liquid and vapor.

Harmful if inhaled.

Causes skin irritation.

Causes serious eye irritation.

May cause allergy or asthma symptoms or breathing difficulties if inhaled.

(Contd. on page 11)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: **HFU ACTIVATOR**

(Contd. of page 10)

May cause an allergic skin reaction.
 Harmful to aquatic life with long lasting effects.

- **Precautionary statements**

Keep away from heat/sparks/open flames/hot surfaces. - 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 breathing dust/fume/gas/mist/vapors/spray
 Wash thoroughly after handling.
 Use only outdoors or in a well-ventilated area.
 Contaminated work clothing must not be allowed out of the workplace.
 Avoid release to the environment.
 Wear protective gloves/protective clothing/eye protection/face protection.
 [In case of inadequate ventilation] wear respiratory protection.
 If on skin (or hair): Take off immediately all contaminated clothing. Rinse skin with water/shower.
 IF INHALED: Remove person to fresh air and keep comfortable for breathing.
 If in eyes: Rinse cautiously with water for several minutes. Remove contact lenses, if present and easy to do. Continue rinsing.
 Call a poison center/doctor if you feel unwell.
 Specific treatment (see on this label).
 Take off contaminated clothing and wash it before reuse.
 If skin irritation or rash occurs: Get medical advice/attention.
 If eye irritation persists: Get medical advice/attention.
 If experiencing respiratory symptoms: Call a poison center/doctor.
 Wash contaminated clothing before reuse.
 In case of fire: Use CO₂, powder or water spray to extinguish.
 Store in a well-ventilated place. Keep cool.
 Dispose of contents/container in accordance with local/regional/national/international regulations.

- **Chemical safety assessment:** A Chemical Safety Assessment has not been carried out.

16 Other information

This information is based on our present knowledge. However, this shall not constitute a guarantee for any specific product features and shall not establish a legally valid contractual relationship.

- **Department issuing SDS:** Environment protection department.
- **Contact:** Product Safety Dept.
- **Date of preparation / last revision** 01/22/2025 / 2
- **Abbreviations and acronyms:**
 IMDG: International Maritime Code for Dangerous Goods
 DOT: US Department of Transportation
 IATA: International Air Transport Association
 EINECS: European Inventory of Existing Commercial Chemical Substances
 ELINCS: European List of Notified Chemical Substances
 CAS: Chemical Abstracts Service (division of the American Chemical Society)
 NFPA: National Fire Protection Association (USA)
 HMIS: Hazardous Materials Identification System (USA)
 VOC: Volatile Organic Compounds (USA, EU)
 PBT: Persistent, Bioaccumulative and Toxic
 vPvB: very Persistent and very Bioaccumulative
 NIOSH: National Institute for Occupational Safety
 OSHA: Occupational Safety & Health
 TLV: Threshold Limit Value
 PEL: Permissible Exposure Limit
 REL: Recommended Exposure Limit
 BEI: Biological Exposure Limit

(Contd. on page 12)

USA

Safety Data Sheet

acc. to OSHA HCS

Printing date 01/22/2025

Reviewed on 01/22/2025

Trade name: HFU ACTIVATOR

(Contd. of page 11)

Flammable Liquids 3: Flammable liquids – Category 3
Acute Toxicity - Inhalation 4: Acute toxicity – Category 4
Skin Irritation 2: Skin corrosion/irritation – Category 2
Eye Irritation 2A: Serious eye damage/eye irritation – Category 2A
Sensitization - Respiratory 1: Respiratory sensitisation – Category 1
Sensitization - Skin 1: Skin sensitisation – Category 1
Aquatic Chronic 3: Hazardous to the aquatic environment - long-term aquatic hazard – Category 3

*** Data compared to the previous version altered.**

USA