

Safety Data Sheet per OSHA HazCom 2012

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1 Identification

Product identifier

Product name: Intrinsic Factor

Stock number: J61698
Relevant identified uses of the substance or mixture and uses advised against.
Identified use: SU24 Scientific research and development

Details of the supplier of the safety data sheet

Manufacturer/Supplier:

Manufacturer/Supplier:
Alfa Aesar
Thermo Fisher Scientific Chemicals, Inc.
30 Bond Street
Ward Hill, MA 01835-8099
Tel: 800-343-0660
Fax: 800-322-4757
Email: tech@alfa.com
www.alfa.com

Information Department: Health, Safety and Environmental Department

Emergency telephone number:

During normal business hours (Monday-Friday, 8am-7pm EST), call (800) 343-0660. After normal business hours, call Carechem 24 at (866) 928-0789.

2 Hazard(s) identification

Classification of the substance or mixture in accordance with 29 CFR 1910 (OSHA HCS)
The product is not classified according to the Globally Harmonized System (GHS).
Hazards not otherwise classified No information known.

Label elements

Label elements
GHS label elements Not applicable
Hazard pictograms Not applicable
Signal word Not applicable
Hazard statements Not applicable
WHMIS classification Not controlled
Classification system

Classification system HMIS ratings (scale 0-4) (Hazardous Materials Identification System)



Health (acute effects) = 1

| Health (acute effects) = 1
| Flammability = 0
| Flammability = 0
| Physical Hazard = 0

Other hazards

Results of PBT and vPvB assessment PBT: Not applicable.

vPvB: Not applicable

3 Composition/information on ingredients

Chemical characterization: Mixtures
Dangerous components: Not applicable
Additional information None known.

Non-Hazardous Ingredients

Purified pig intrinsic factor protein 0.05% 7732-18-5 Water 99.95%

4 First-aid measures

Description of first aid measures

Description of first aid measures
After inhalation
Supply fresh air. If required, provide artificial respiration. Keep patient warm.
Seek immediate medical advice.
After skin contact
Immediately wash with water and soap and rinse thoroughly.
Seek immediate medical advice.
After eye contact Rinse opened eye for several minutes under running water. Then consult a doctor.
After swallowing Seek medical treatment.
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 Product is not flammable. Use fire-fighting measures that suit the surrounding fire.
Special hazards arising from the substance or mixture
If this product is involved in a fire, the following can be released:
Carbon monoxide and carbon dioxide

Nitrogen oxides (NOx)

Nitrogen oxides (NOx)
Additional decomposition products are unknown.

Advice for firefighters

Protective equipment:

Wear self-contained respirator.

Wear fully protective impervious suit.

6 Accidental release measures

Personal precautions, protective equipment and emergency procedures

Wear protective equipment. Keep unprotected persons away. Ensure adequate ventilation

Environmental precautions: Do not allow material to be released to the environment without proper governmental permits.

Methods and material for containment and cleaning up: Absorb with liquid-binding material (sand, diatomite, acid binders, universal binders, sawdust).

Prevention of secondary hazards: No special measures required.

(Controlled)

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Product name: Intrinsic Factor

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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.

7 Handling and storage

Handling
Precautions for safe handling Keep container tightly sealed.
Information about protection against explosions and fires: The product is not flammable

Conditions for safe storage, including any incompatibilities

Storage Requirements to be met by storerooms and receptacles: Store in freezer (-20 $^{\circ}$ C). Information about storage in one common storage facility:

Information about storage in one common storage rading.

Protect from heat.

Water reacts with many metals to give hydrogen, often violently. Water is also incompatible with many reactive organic and inorganic chemicals.

Further information about storage conditions: Keep container tightly sealed.

Specific end use(s) No further relevant information available.

8 Exposure controls/personal protection

Additional information about design of technical systems:
Properly operating chemical fume hood designed for hazardous chemicals and having an average face velocity of at least 100 feet per minute.

Control parameters
Components with limit values that require monitoring at the workplace:
The product does not contain any relevant quantities of materials with critical values that have to be monitored at the workplace.
Additional information: No data

Exposure controls

Personal protective equipment

Personal protective equipment
General protective and hygienic measures
The usual precautionary measures for handling chemicals should be followed.
Keep away from foodstuffs, beverages and feed.
Remove all soiled and contaminated clothing immediately.
Wash hands before breaks and at the end of work.
Maintain an ergonomically appropriate working environment.
Breathing equipment: Use suitable respirator when high concentrations are present.
Protection of hands:
Impervious gloves
Check protective gloves prior to each use for their proper condition.
The selection of suitable gloves not only depends on the material, but also on quality.
Penetration time of glove material (in minutes) Not determined
Eye protection: Safety glasses
Body protection: Protective work clothing.

9 Physical and chemical properties

Information on basic physical and chemical properties General Information

Appearance: Form:

Odor:

Not determined Not determined Odor threshold: pH-value: Not determined.

Change in condition
Melting point/Melting range:
Boiling point/Boiling range:
Sublimation temperature / start: Not determined Not determined Not determined Not determined Not determined

Submitation temperature / Si Flammability (solid, gaseous) Ignition temperature: Decomposition temperature: Auto igniting:

Not determined Product is not selfigniting.

Not determined.

Danger of explosion:
Explosion limits:
Lower:
Upper:
Vapor pressure at 20 °C (68 °F):

Not determined Not determined 23 hPa (17 mm Hg) Not determined Not determined

Density: Relative density Vapor density Evaporation rate Solubility in / Miscibility with

Not determined Not determined

Water: Fully miscible Partition coefficient (n-octanol/water): Not determined.

Viscosity: dynamic: kinematic:

Not determined Not determined

Solvent content:

Organic solvents: Other information

No further relevant information available.

10 Stability and reactivity

Reactivity No information known.
Chemical stability Stable under recommended storage conditions.
Thermal decomposition / conditions to be avoided: Decomposition will not occur if used and stored according to specifications.
Possibility of hazardous reactions
Water reacts violently with alkali metals.
Water reacts violently metals to give hydrogen, often violently. Water is also incompatible with many reactive organic and inorganic chemicals.
Conditions to avoid No further relevant information available.
Incompatible materials: Heat

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Product name: Intrinsic Factor

Hazardous decomposition products:

Carbon monoxide and carbon dioxide Nitrogen oxides Additional decomposition products are unknown.

11 Toxicological information

Information on toxicological effects

Information on toxicological effects
Acute toxicity: No effects known.
LD/LC50 values that are relevant for classification: No data
Skin irritation or corrosion: May cause irritation
Eye irritation or corrosion: May cause irritation
Sensitization: No sensitizing effects known.
Germ cell mutagenicity: No effects known.
Carcinogenicity: No classification data on carcinogenic properties of this material is available from the EPA, IARC, NTP, OSHA or ACGIH.
Reproductive toxicity: No effects known.
Specific target organ system toxicity - repeated exposure: No effects known.
Specific target organ system toxicity - single exposure: No effects known.
Aspiration hazard: No effects known.
Subacute to chronic toxicity: No effects known.
Additional toxicological information:
To the best of our knowledge the acute and chronic toxicity approved calculation methods for preparations.

12 Ecological information

Toxicity
Aquatic toxicity: No further relevant information available.
Persistence and degradability No further relevant information available.
Bioaccumulative potential No further relevant information available.
Mobility in soil No further relevant information available.
Additional ecological information:
General notes:

General notes:
Do not allow material to be released to the environment without proper governmental permits.
Avoid transfer into the environment.
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 Consult state, local or national regulations to ensure proper disposal.
Uncleaned packagings:
Recommendation: Disposal must be made according to official regulations.
Recommended cleansing agent: Water, if necessary with cleansing agents.

14 Transport information

UN-Number DOT, ADN, IMDG, IATA	Not applicable
UN proper shipping name DOT, ADN, IMDG, IATA	Not applicable

Transport hazard class(es)

DOT, ADR, ADN, IMDG, IATA

Not applicable Class

Packing group DOT, IMDG, IATA

Environmental hazards: Marine pollutant (IMDG): No

Special precautions for user Not applicable.

Transport in bulk according to Annex II of MARPOL73/78 and the IBC Code Not applicable.

Transport/Additional information:

DOT

Marine Pollutant (DOT):

No

Not applicable

UN "Model Regulation":

15 Regulatory information

Safety, health and environmental regulations/legislation specific for the substance or mixture GHS label elements Not applicable Hazard pictograms Not applicable Signal word Not applicable

Hazard statements Not applicable

National regulations

This product is not listed in the U.S. Environmental Protection Agency Toxic Substances Control Act Chemical Substance Inventory. Use of this product is restricted to research and development only. This product must be used by or directly under the supervision of a technically qualified individual as defined by TSCA. This product must not be used for commercial purposes or in formulations for commercial purposes.

Some or all of the components of this product are not listed on the Canadian Domestic Substances List (DSL) or the Canadian Non-Domestic Substances List

(NDSL)

SARA Section 313 (specific toxic chemical listings)

None of the ingredients are listed.

California Proposition 65

Prop 65 - Chemicals known to cause cancer

None of the ingredients are listed.

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Product name: Intrinsic Factor

Prop 65 - Developmental toxicity

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None of the ingredients are listed. Prop 65 - Developmental toxicity, female

None of the ingredients are listed.

Prop 65 - Developmental toxicity, male

None of the ingredients are listed.

Information about limitation of use: For use only by technically qualified individuals.

Other regulations, limitations and prohibitive regulations

Substance of Very High Concern (SVHC) according to the REACH Regulations (EC) No. 1907/2006.

None of the ingredients are listed.

The conditions of restrictions according to Article 67 and Annex XVII of the Regulation (EC) No 1907/2006 (REACH) for the manufacturing, placing on the market and use must be observed.

None of the ingredients is listed.

Annex XIV of the REACH Regulations (requiring Authorisation for use)

None of the ingredients is listed.

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

16 Other information

Employers should use this information only as a supplement to other information gathered by them, and should make independent judgement of suitability of this information 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 Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the user. Conformance with this Material Safety Data Sheet, or in combination with any other product or process, is the responsibility of the use Department issuing SDS: Global Marketing Department Date of preparation / last revision 11/24/2015 / Abbreviations and acronyms:

ADR: Accord européen sur le transport des marchandises dangereuses par Route (European Agreement concerning the International Carriage of Dangerous Goods by Road)
DOT: US Department of Transportation
EINECS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European Inventory of Existing Commercial Chemical Substances
ELINCS: European List of Notified Chemical Substances
ELINCS: European List of Notified Chemical Substances
ELINCS: Horizonal Labstracts Service (division of the American Chemical Society)
HMIS: Hazardous Materials Identification System (USA)
WHMIS: Workplace Hazardous Materials Information System (Canada)
LC50: Lethal concentration, 50 percent
VPUB: very Persistent and very Bioaccumulative
ACGIH: American Conference of Governmental Industrial Hygienists (USA)
OSHA: Occupational Safety and Health Administration (USA)
NTP: National Toxicology Program (USA)
IARC: International Agency for Research on Cancer
EPA: Environmental Protection Agency (USA)

USA